

Figure 1

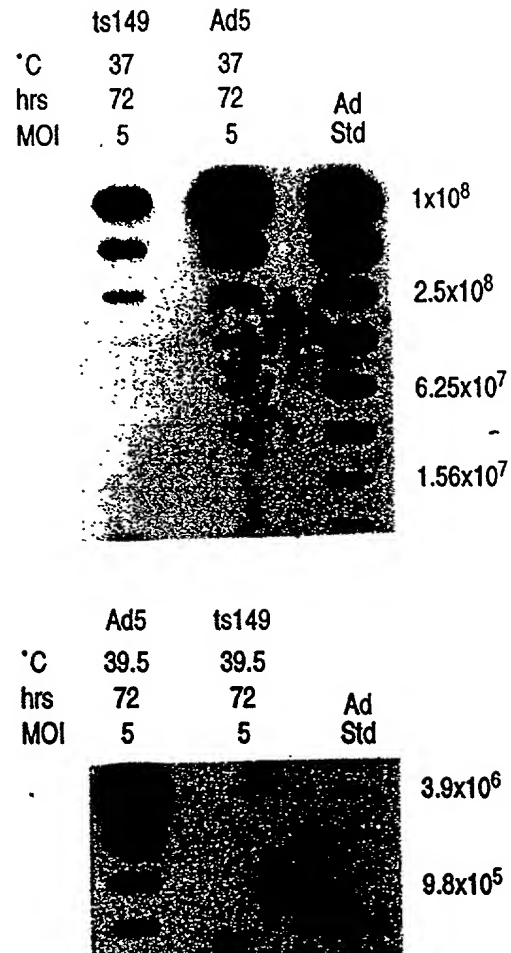


Figure 2

| ts149 | | | | Ad5 | ts149 | | °C |
|-------|----|----|----|-----|-------|----|-----|
| 39.5 | | | | 37 | 39.5 | | hrs |
| 72 | | | | | 72 | 96 | |
| 5 | 10 | 20 | 40 | | 5 | 5 | MOI |

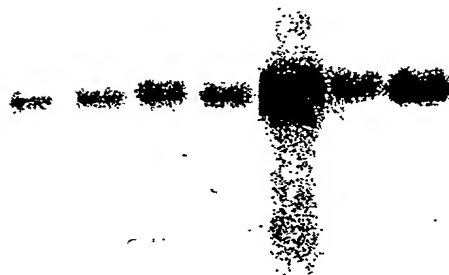


Figure 3

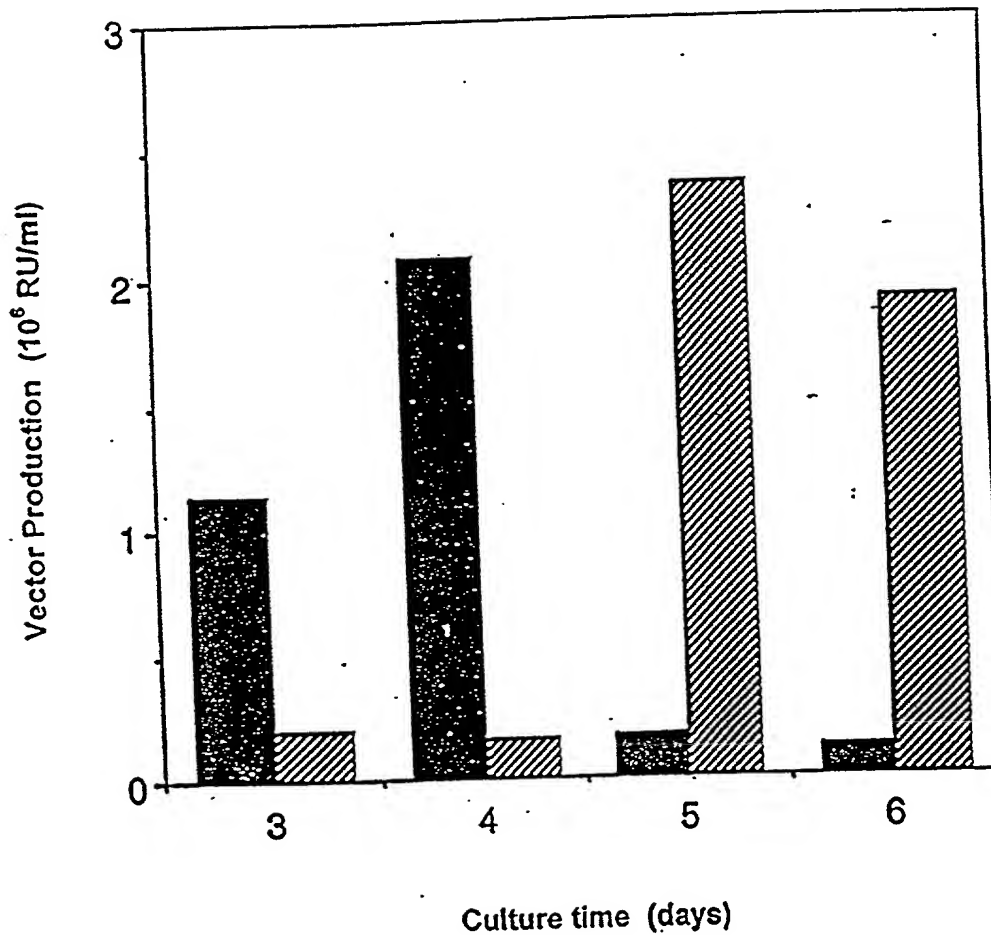


Figure 4

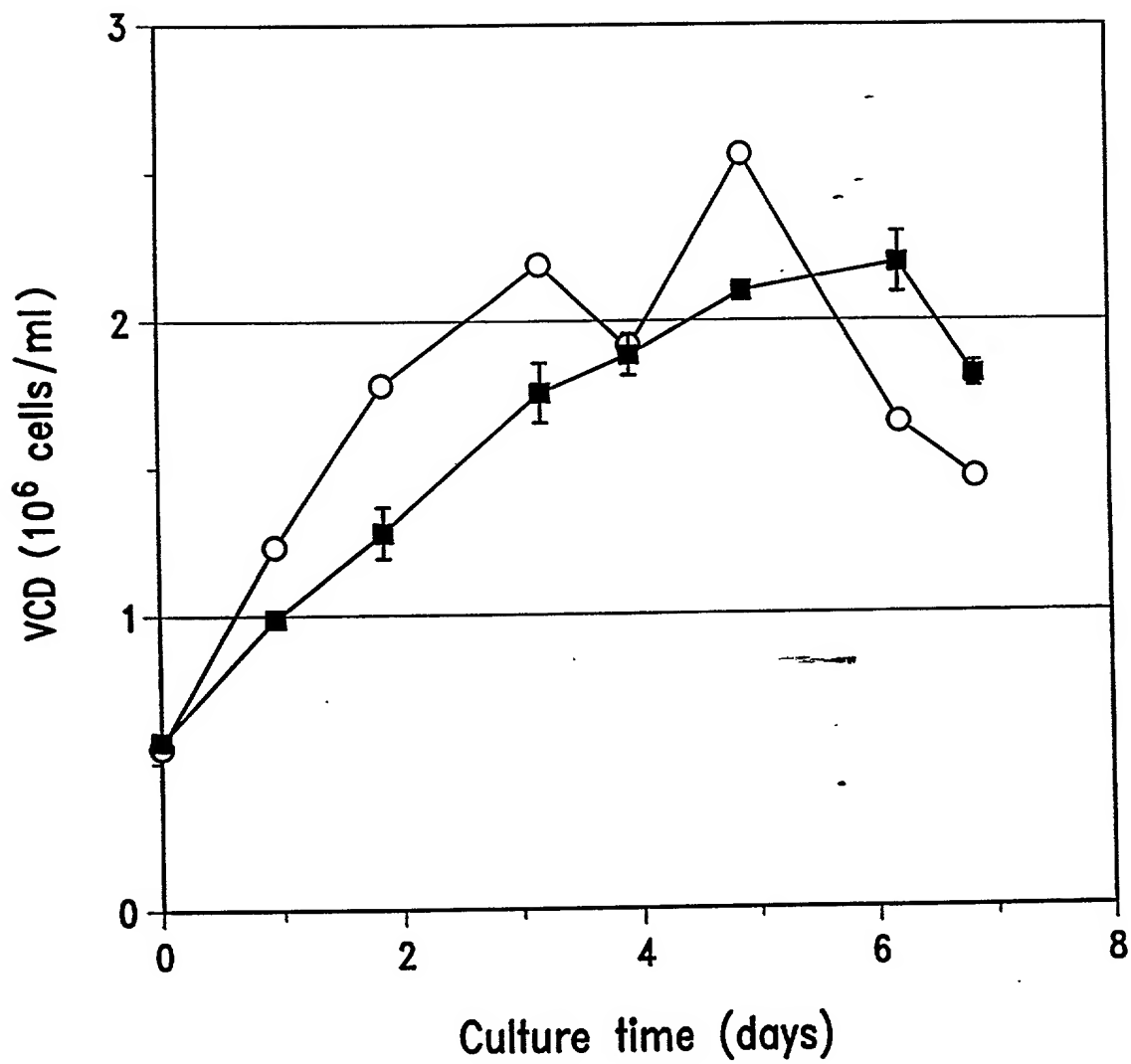


Figure 5

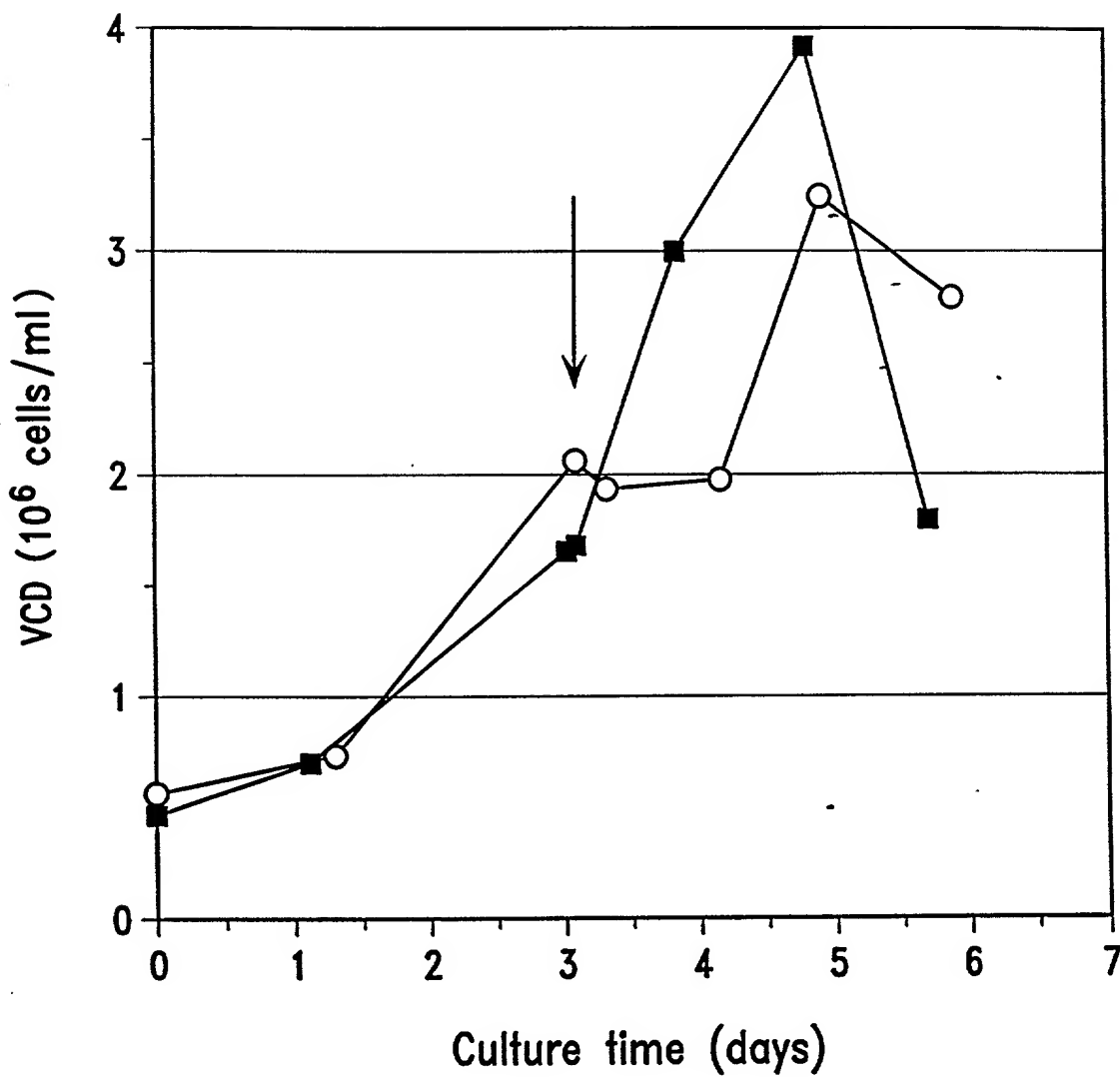


Figure 6

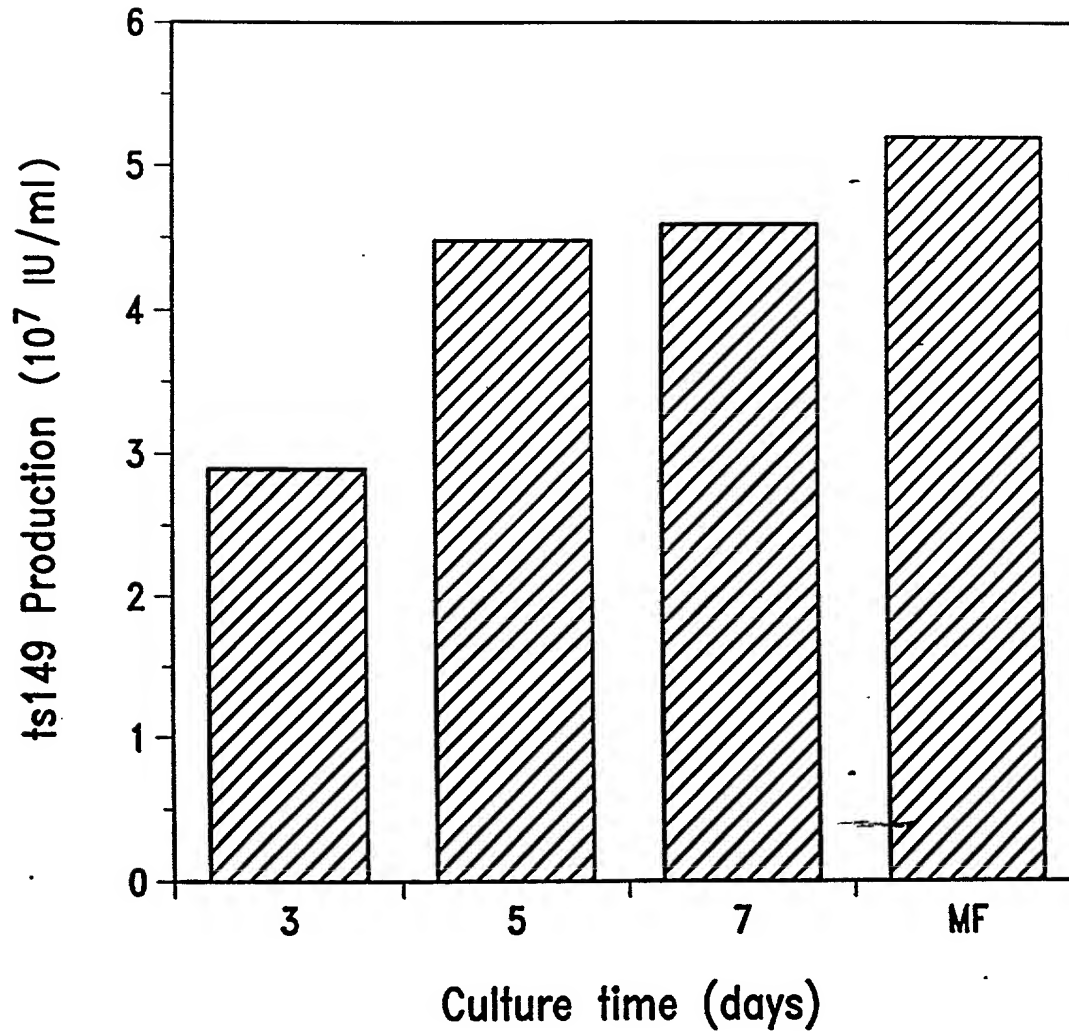


Figure 7

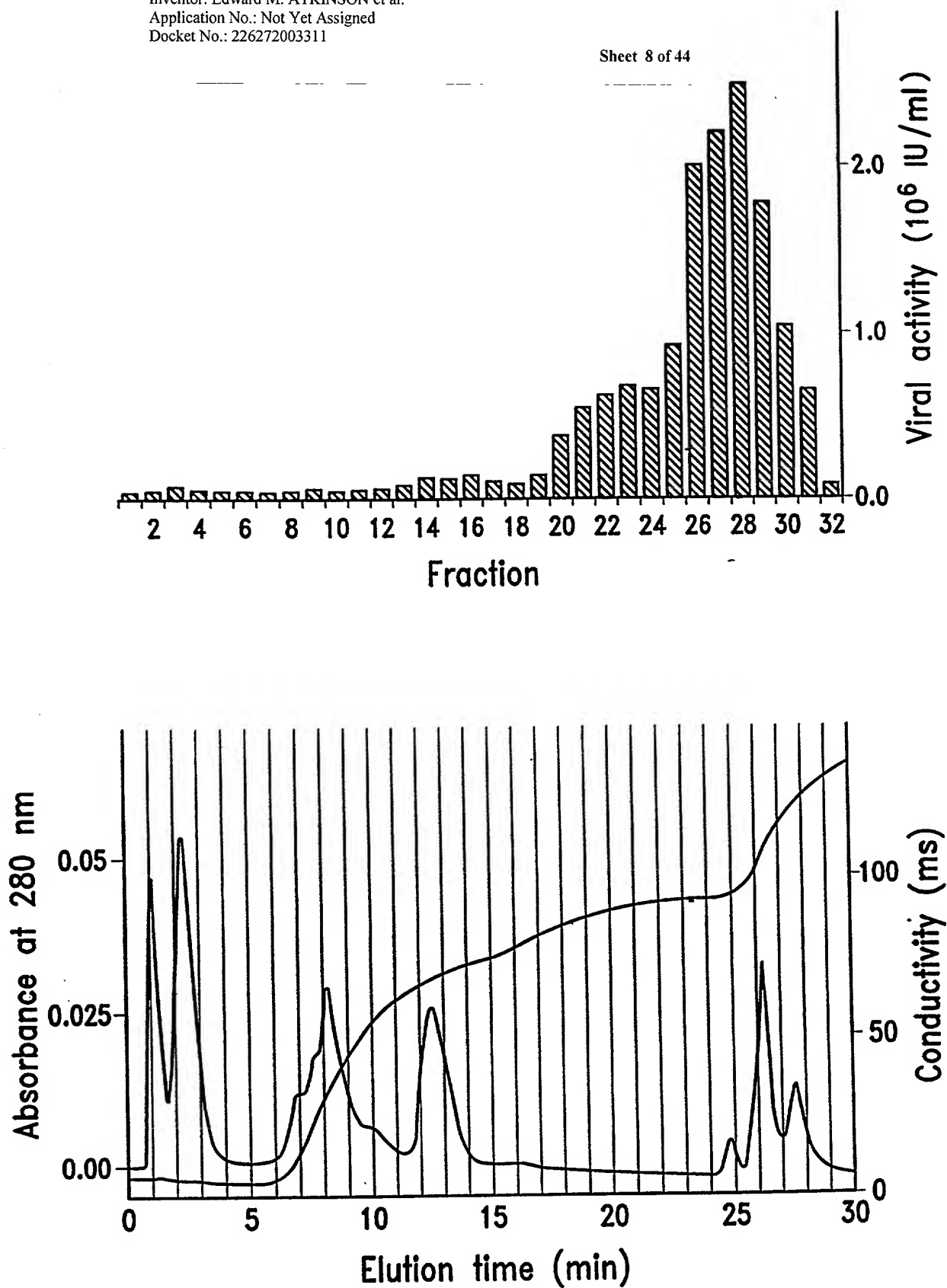


Figure 8

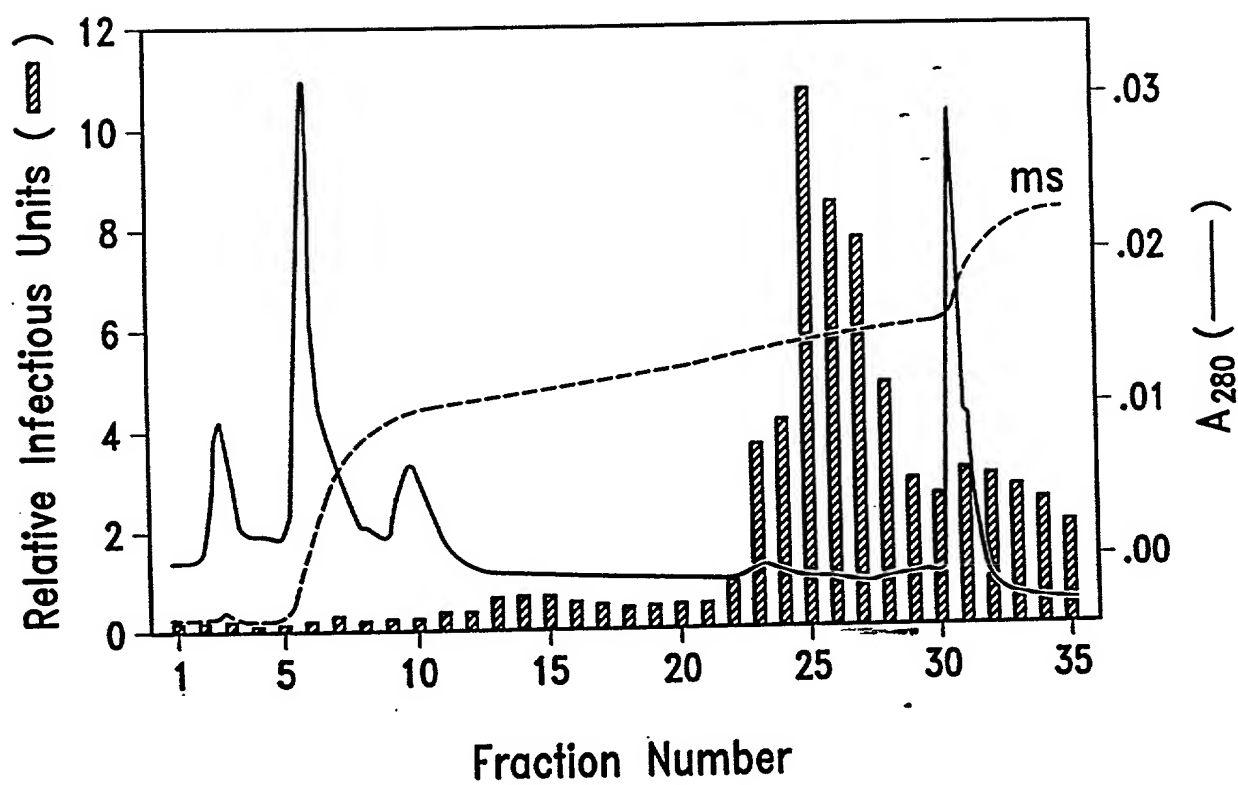


Figure 9

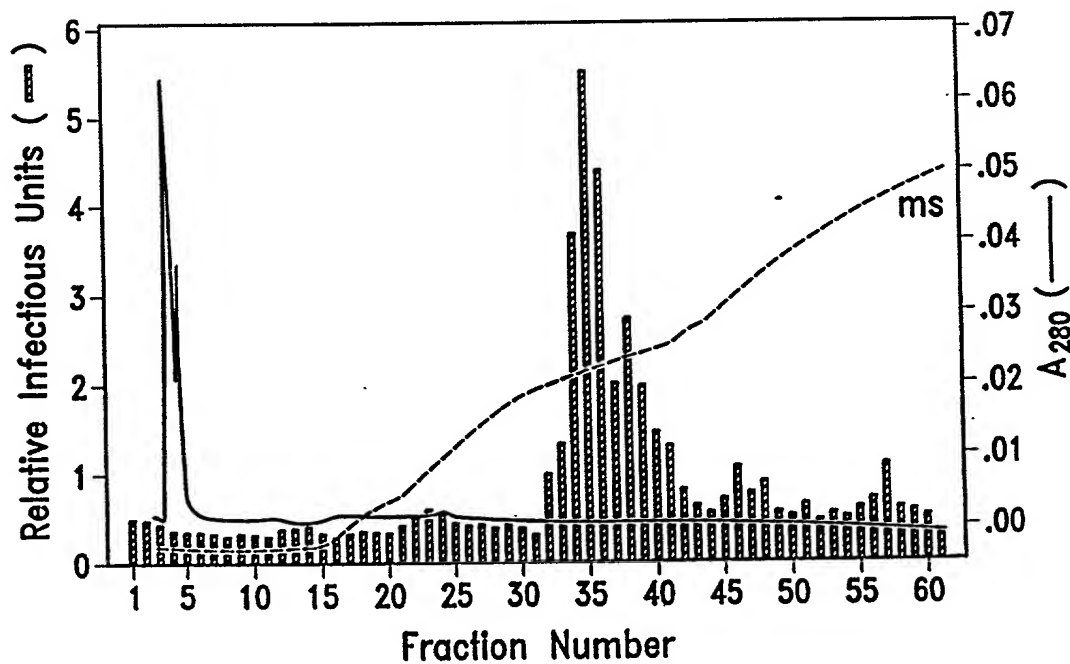
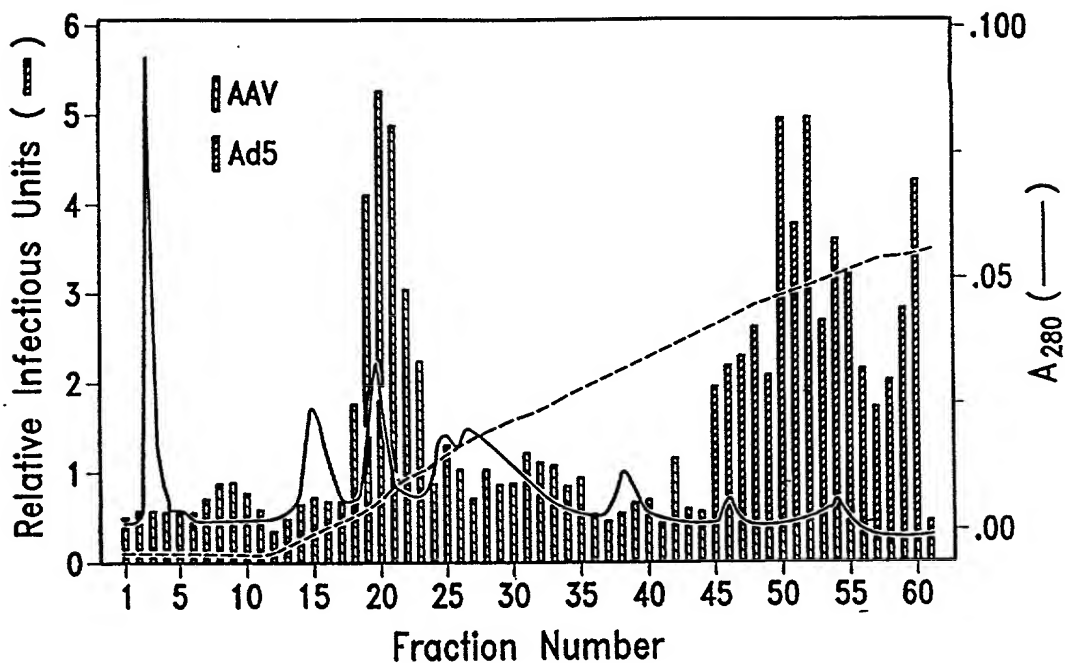


Figure 10

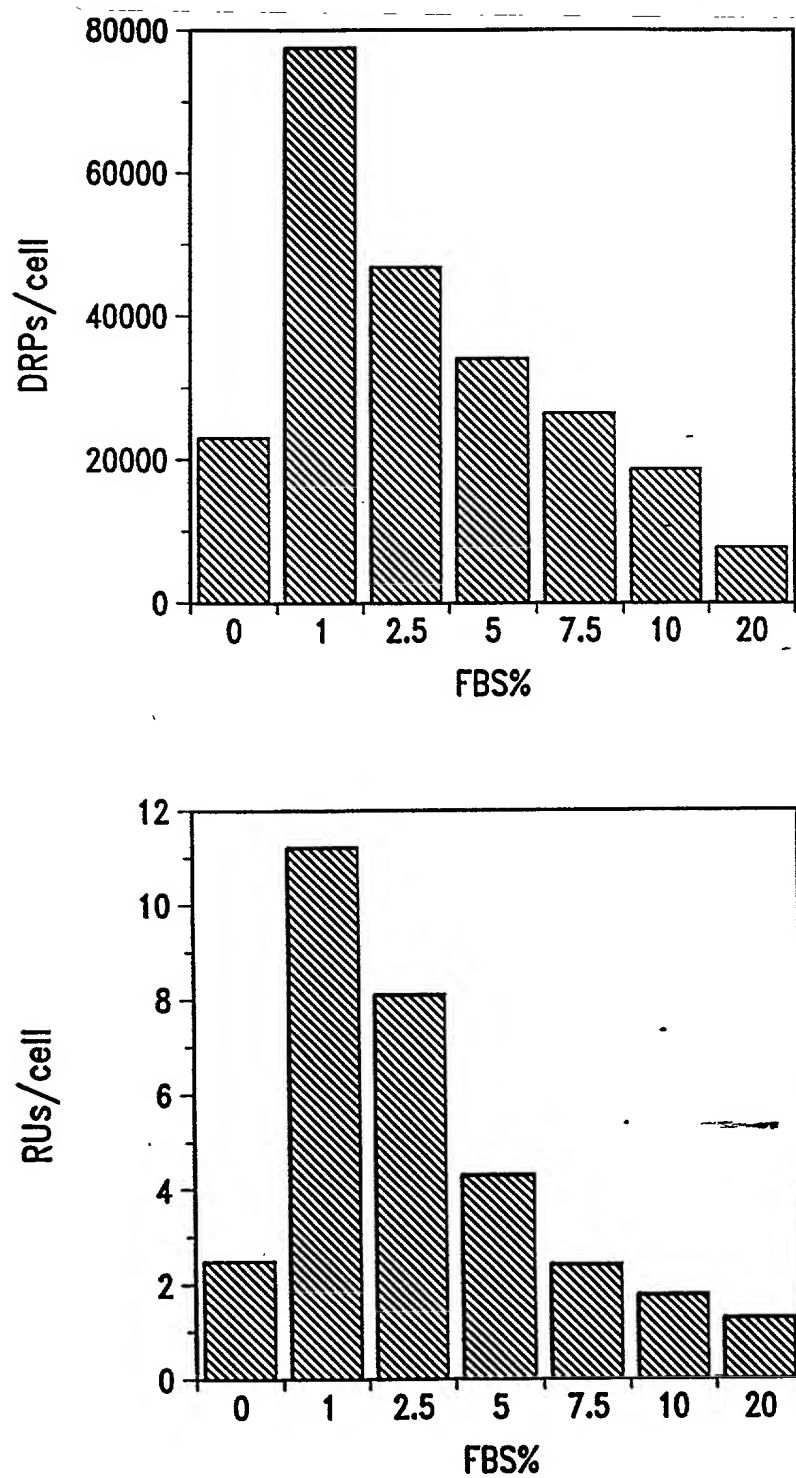


Figure 11

PI Pool
PI Pool + Ad5
Initial Permeate
Bulk Permeate
Bulk Retentate
Conc. Product
MWM

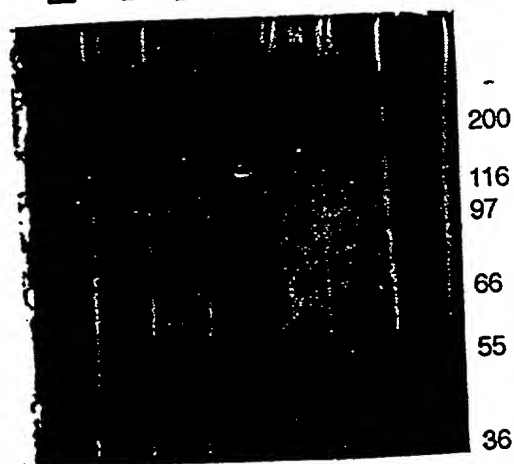


Figure 12

52471c2.bio - 2000.0 μ l 1:AAV FILTR

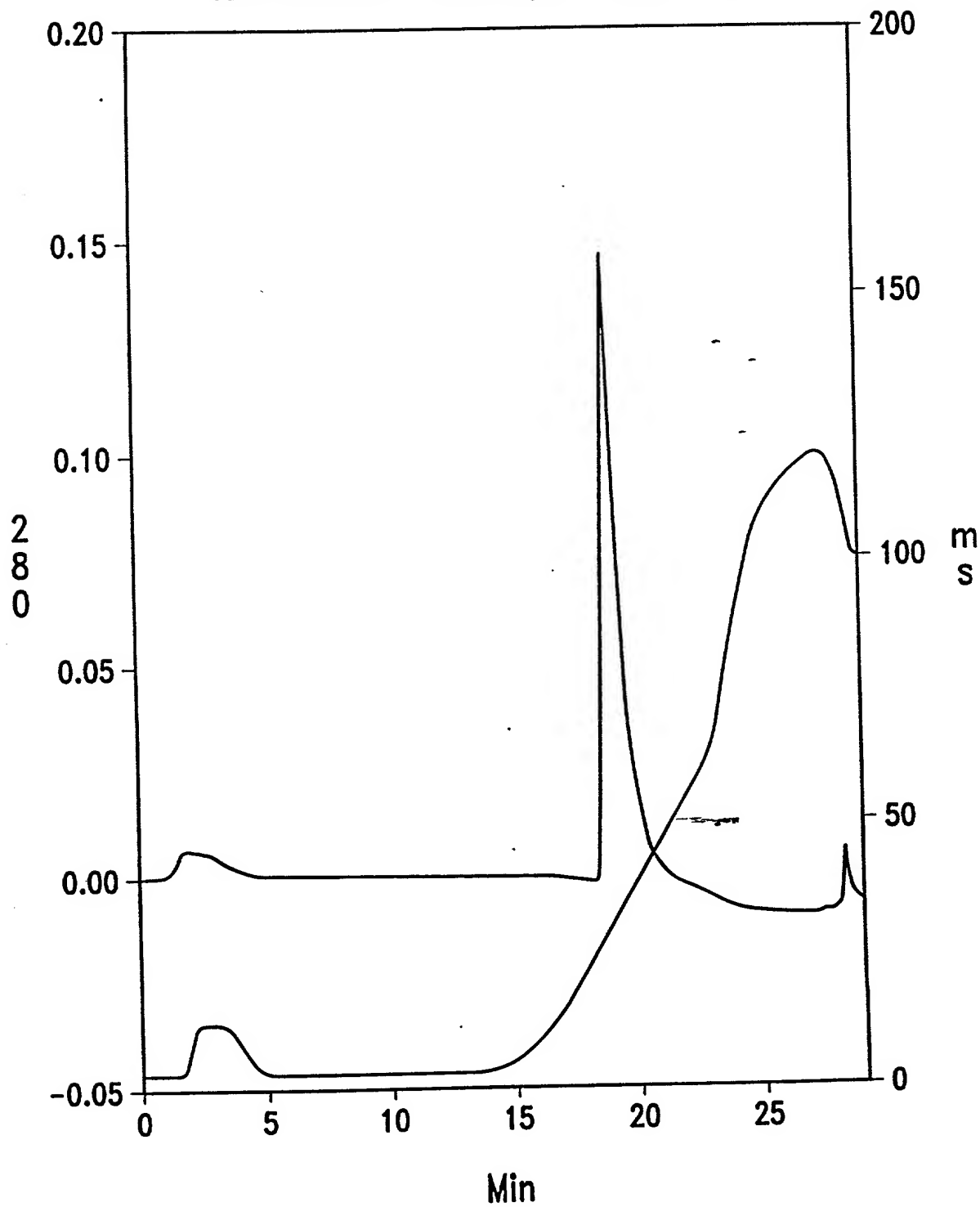
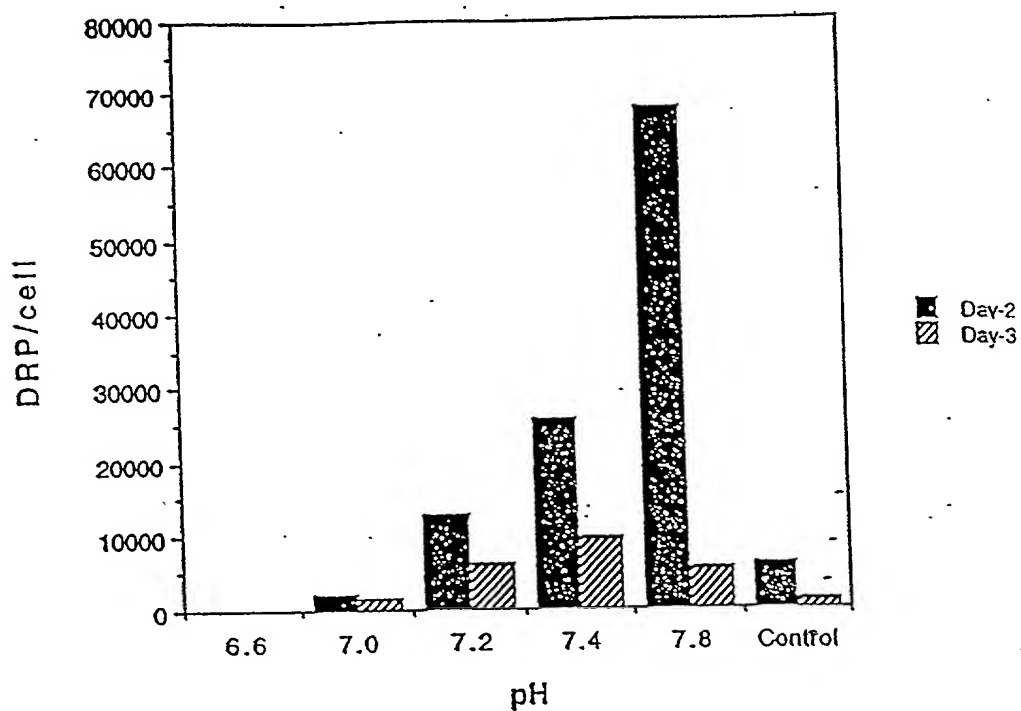


Figure 13

A

pH Experiment #1
 DRP Production at different pH's



B

pH Experiment #2
 DRP/cell at different pH's

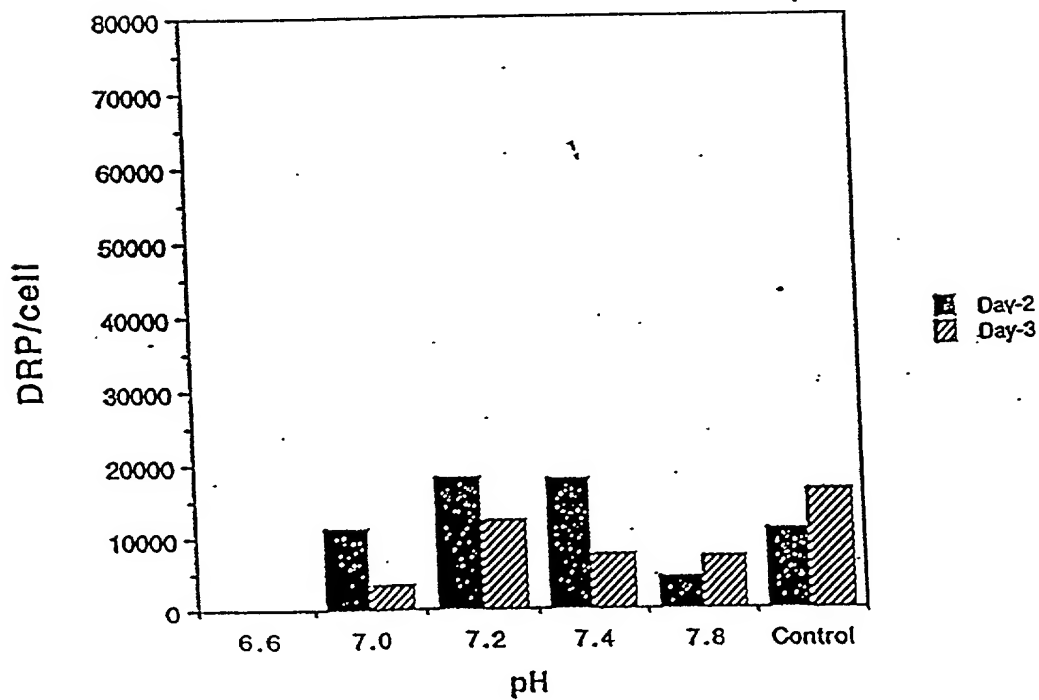
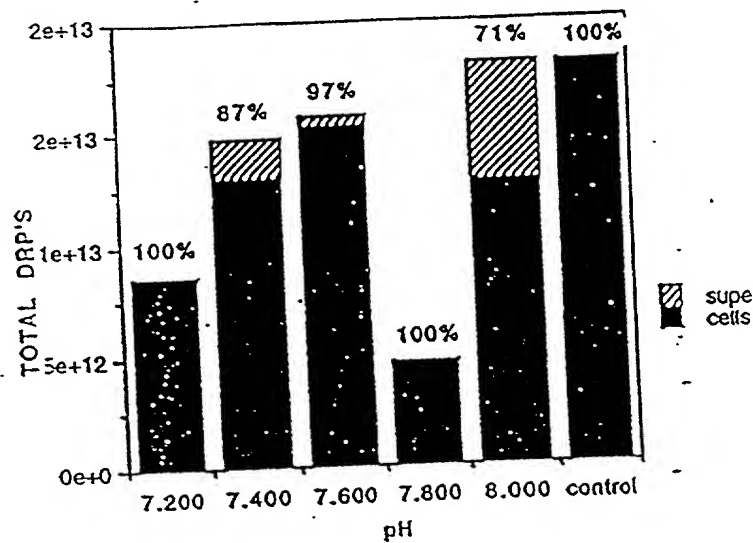


Figure 14

A

CFTR JL-14 REACTOR pH EXPERIMENT #3
 DISTRIBUTION OF VECTOR IN CELLS/SUPE
 TOTAL CULTURE DRP'S DAY 2



B

CFTR JL-14 REACTOR pH EXPERIMENT #3
 DISTRIBUTION OF VECTOR IN CELLS/SUPE
 TOTAL CULTURE DRP'S DAY 3

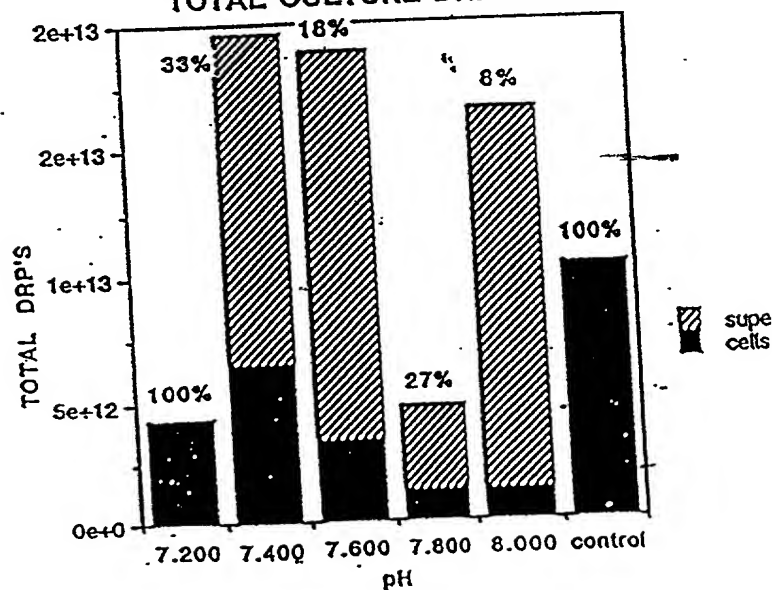
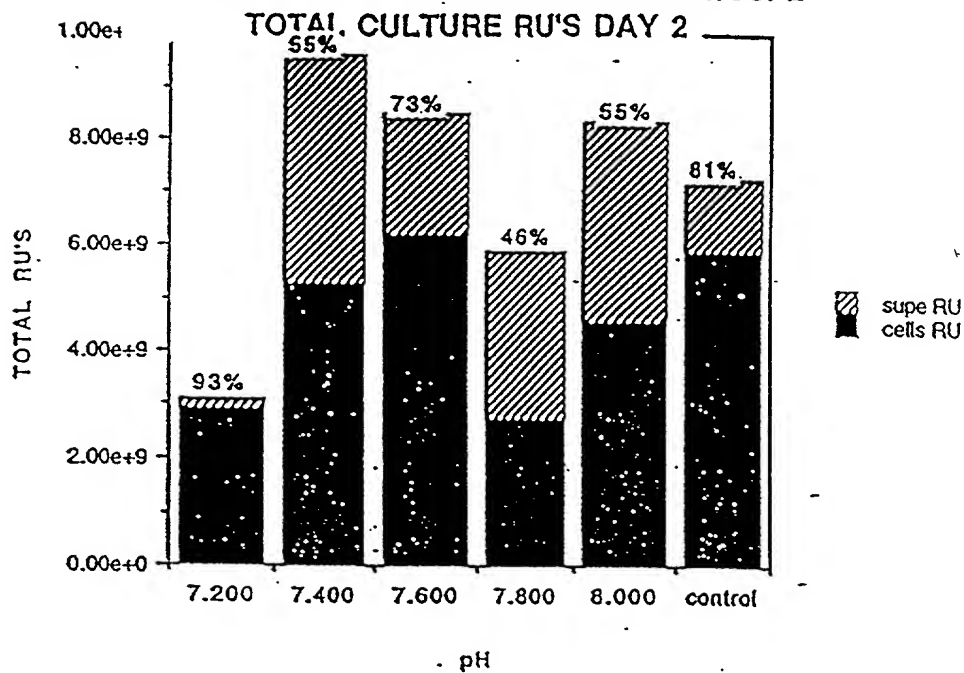


Figure 15

A
CFTR JL-14 REACTOR pH EXPERIMENT #3
DISTRIBUTION OF VECTOR IN CELLS/SUPE



B
CFTR JL-14 REACTOR pH EXPERIMENT #3
DISTRIBUTION OF VECTOR IN CELLS/SUPE

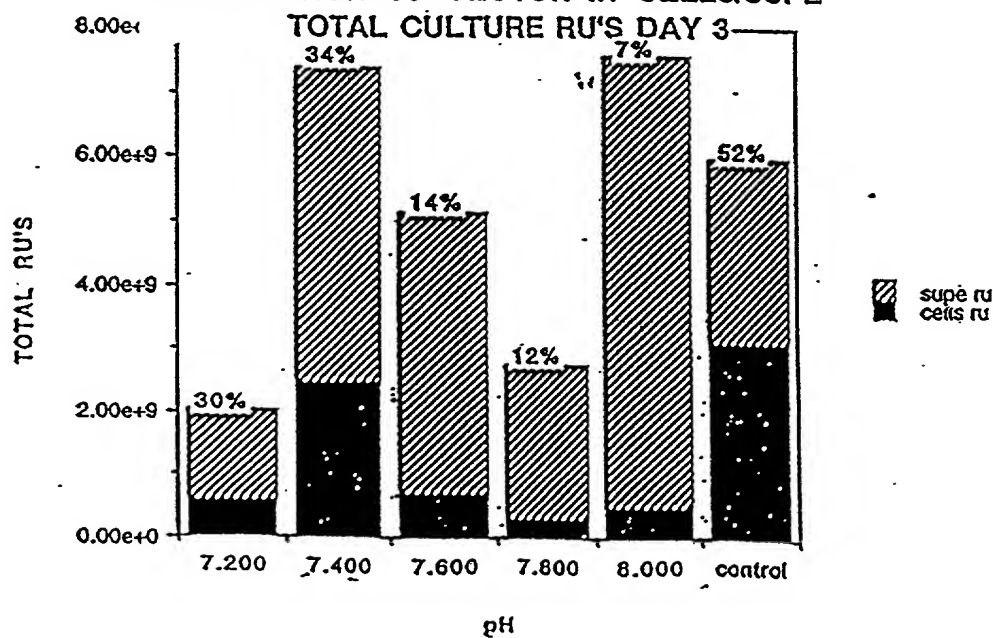


Figure 16

CFTR JL-14 REACTOR pH EXPERIMENT #3
DAY 3 PARTICLE TO INFECTIVITY
SUPERNATANT AND CELLS

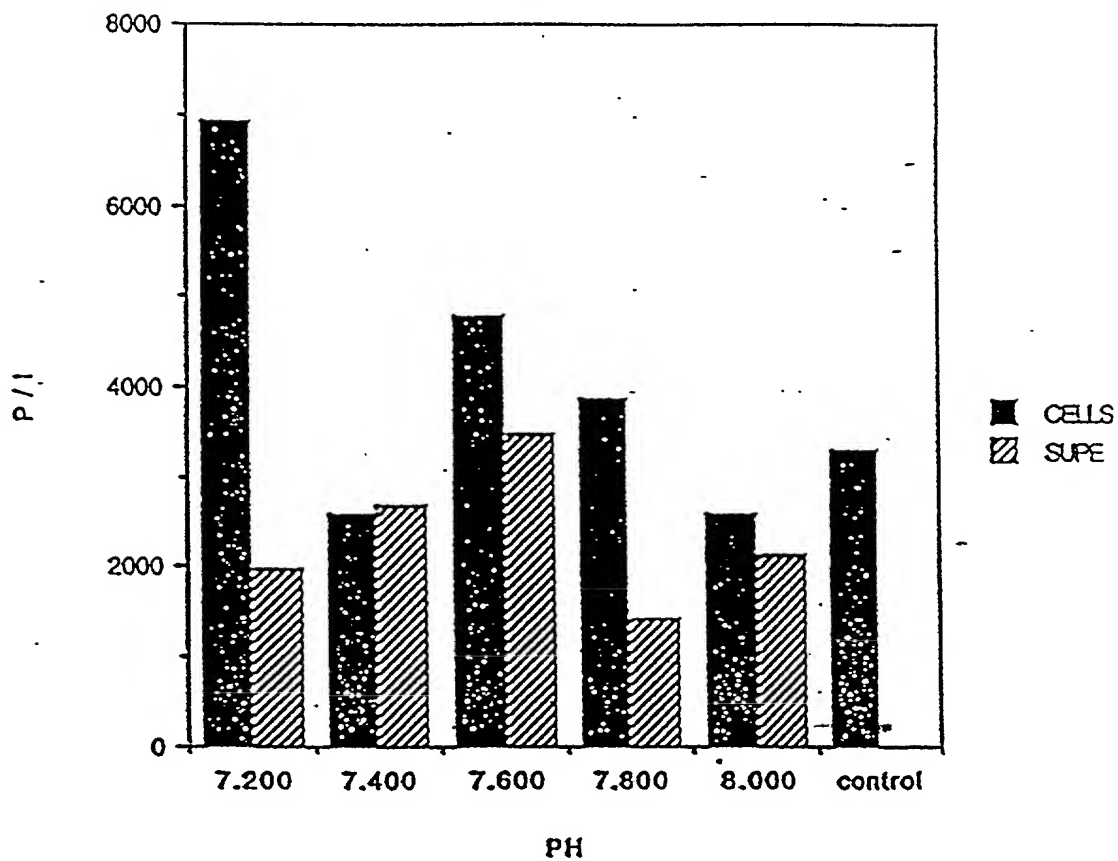


Figure 17

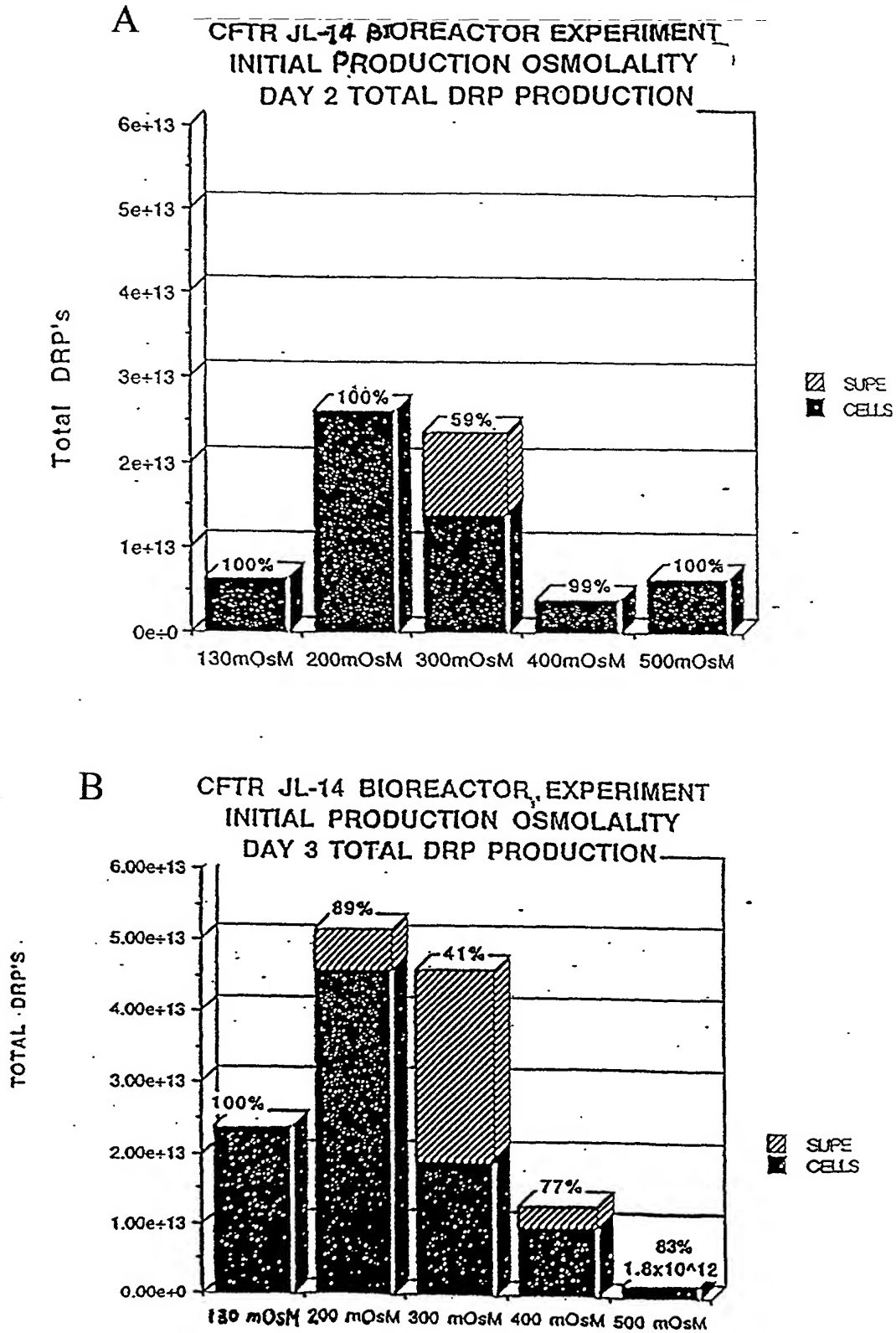


Figure 18

CFTR JL-14 BIOREACTOR EXPERIMENT
 INITIAL PRODUCTION OSMOLALITY
 DAY 4 TOTAL DRP PRODUCTION

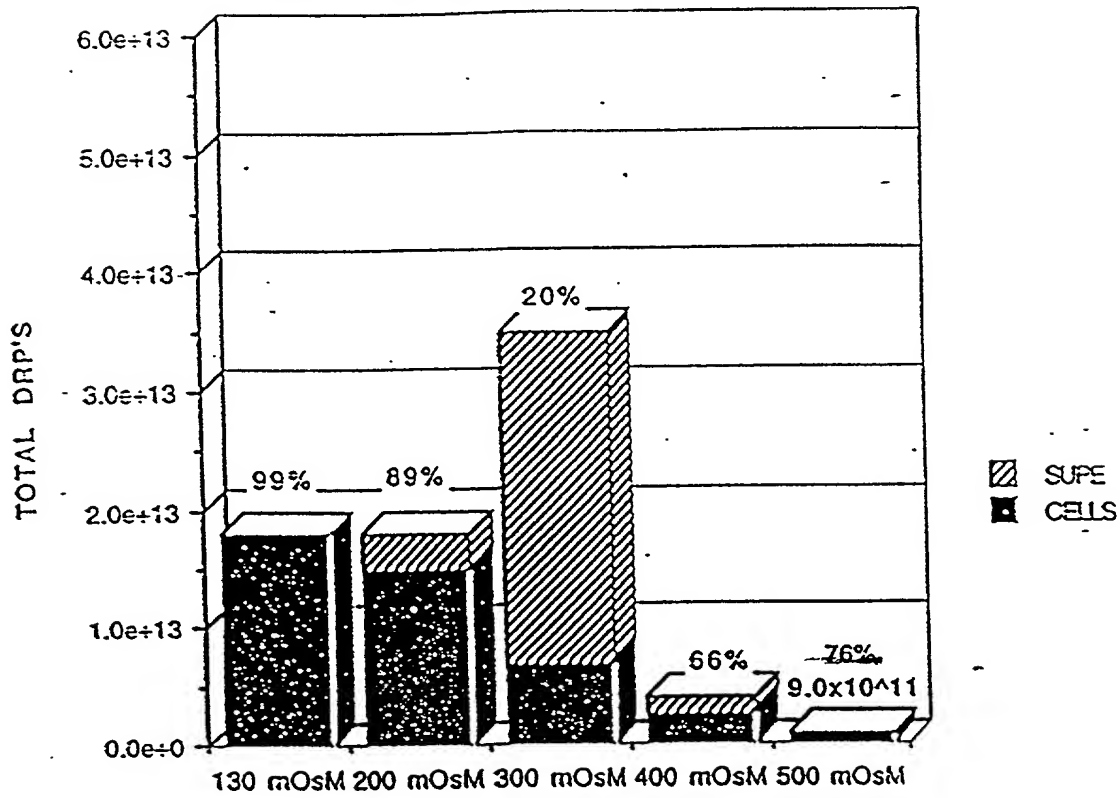
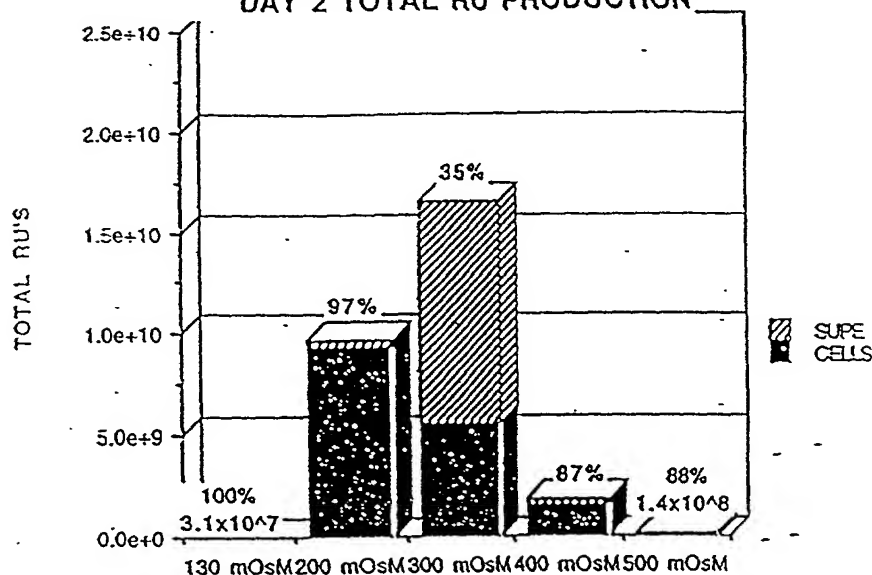


Figure 18C

A CFTR JL-14 BIOREACTOR EXPERIMENT
INITIAL PRODUCTION OSMOLALITY
DAY 2 TOTAL RU PRODUCTION



B CFTR JL-14 BIOREACTOR EXPERIMENT
INITIAL PRODUCTION OSMOLALITY
DAY 3 TOTAL RU PRODUCTION

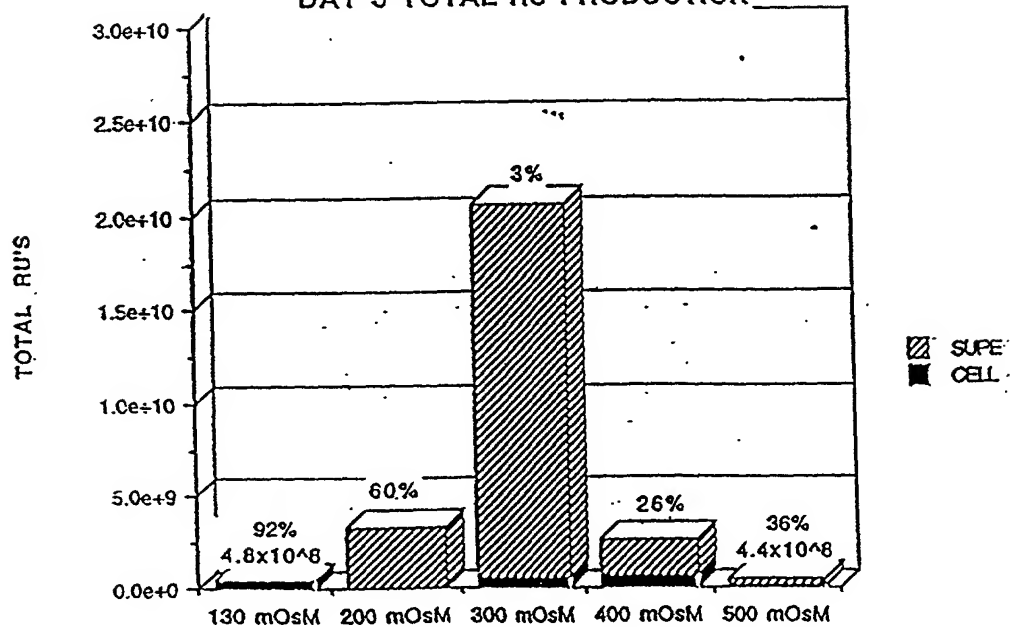


Figure 19

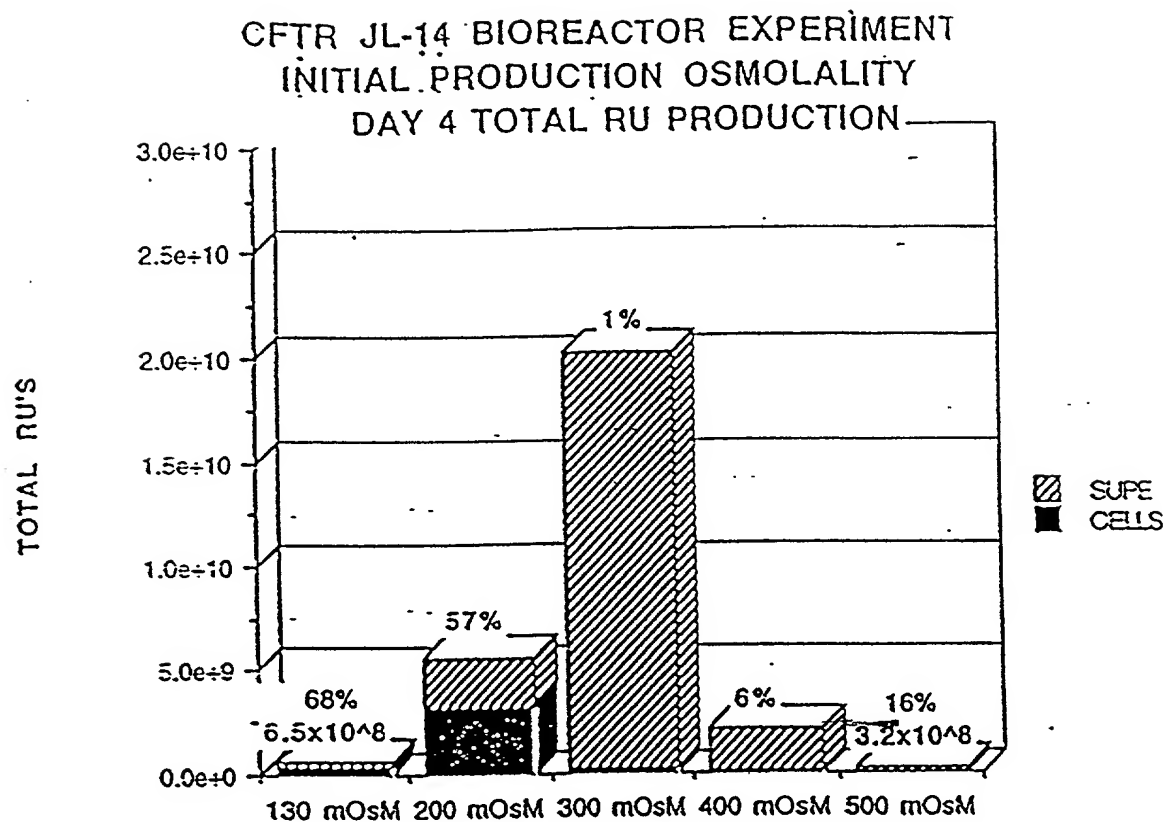


Figure 19C

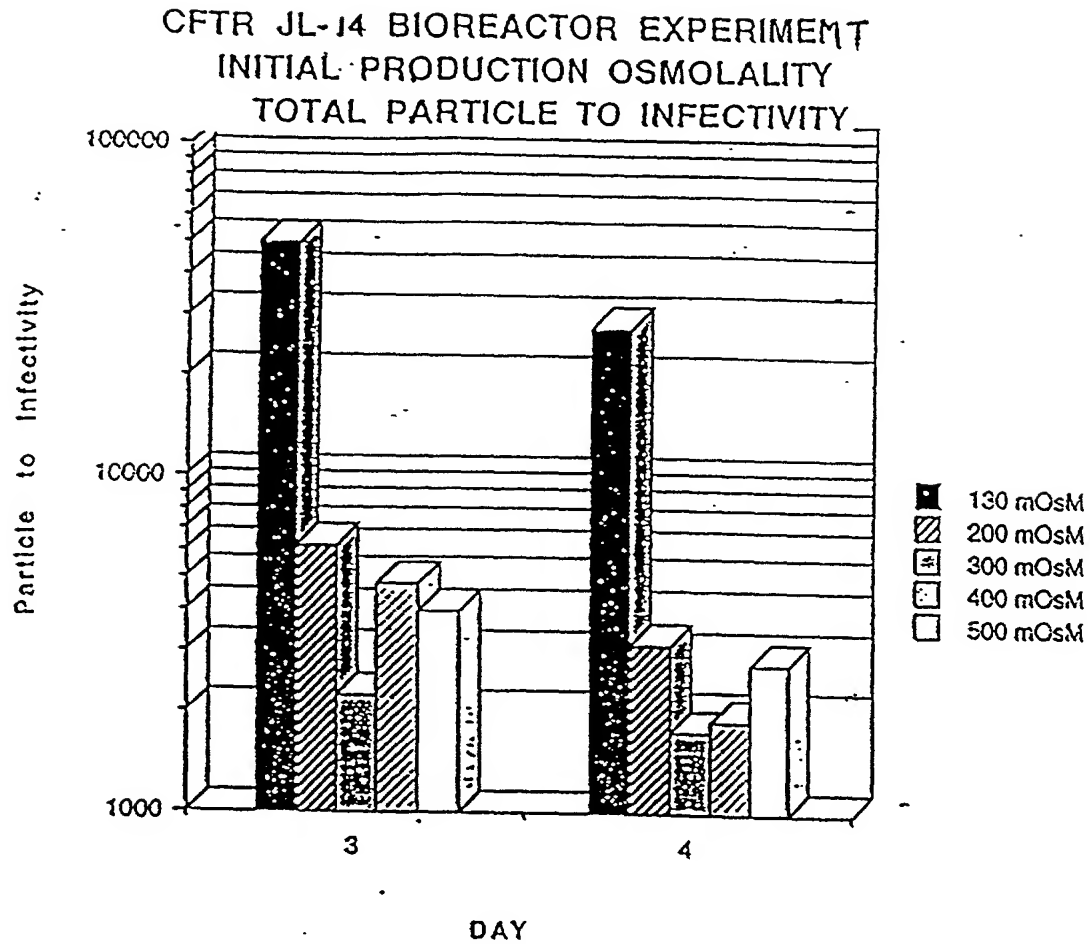
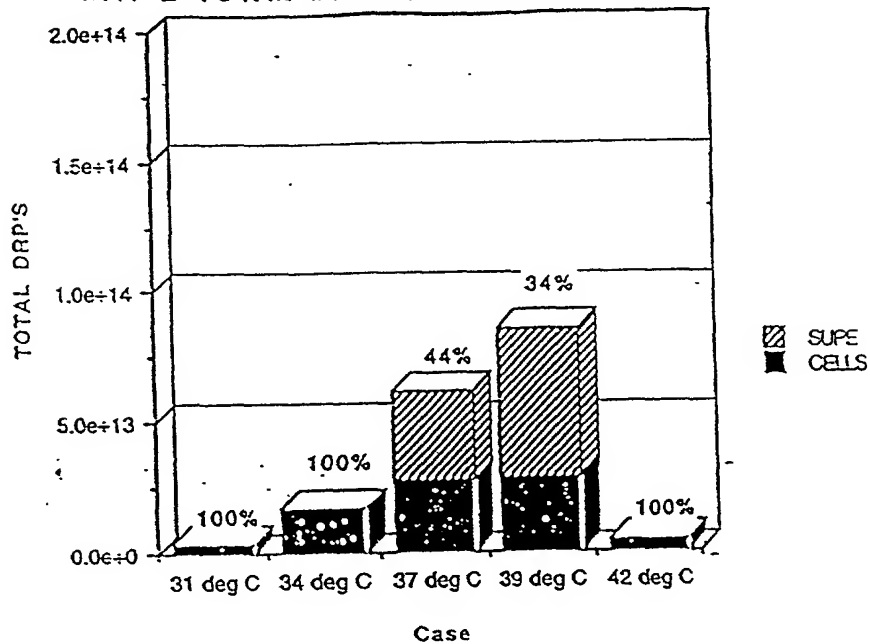


Figure 20

A

CFTR JL-14 REACTOR EXP. TEMPERATURE
 DAY 2 TOTAL DNASE RESISTANT PARTICLES



B

CFTR JL-14 REACTOR EXP. TEMPERATURE
 DAY 3 TOTAL DNASE RESISTANT PARTICLES

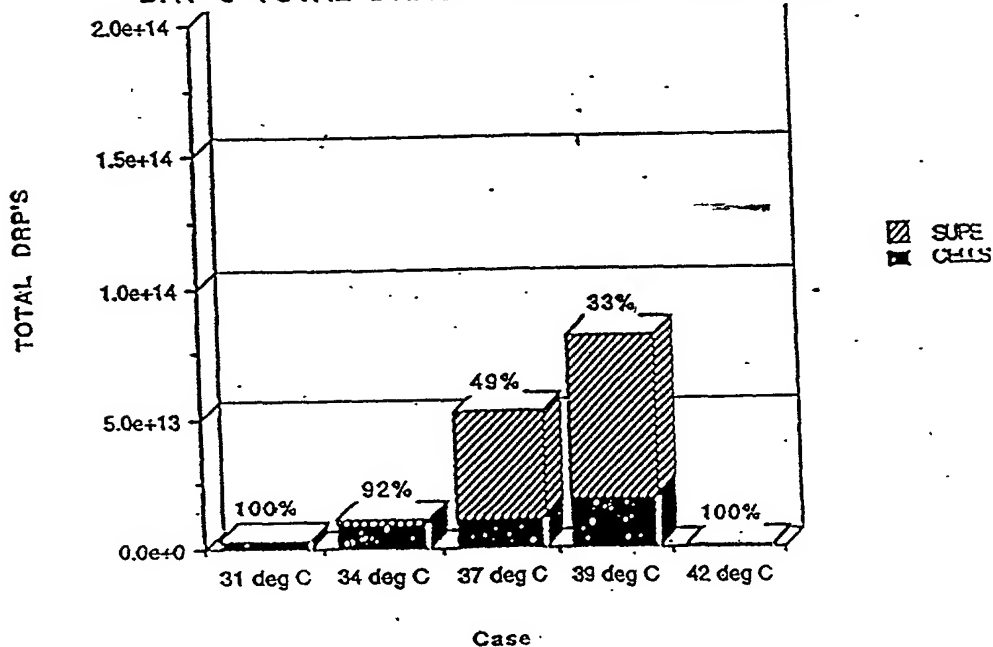


Figure 21

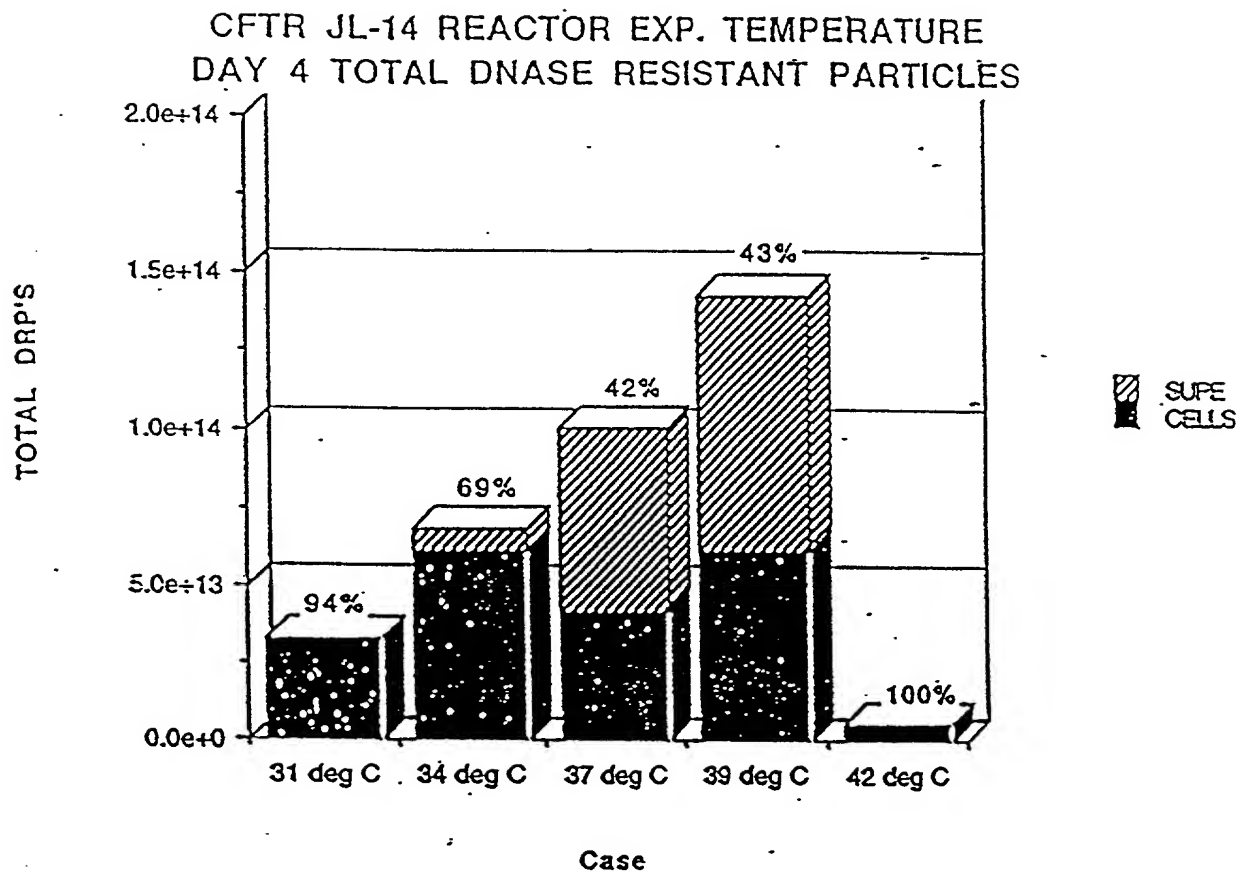


Figure 21C

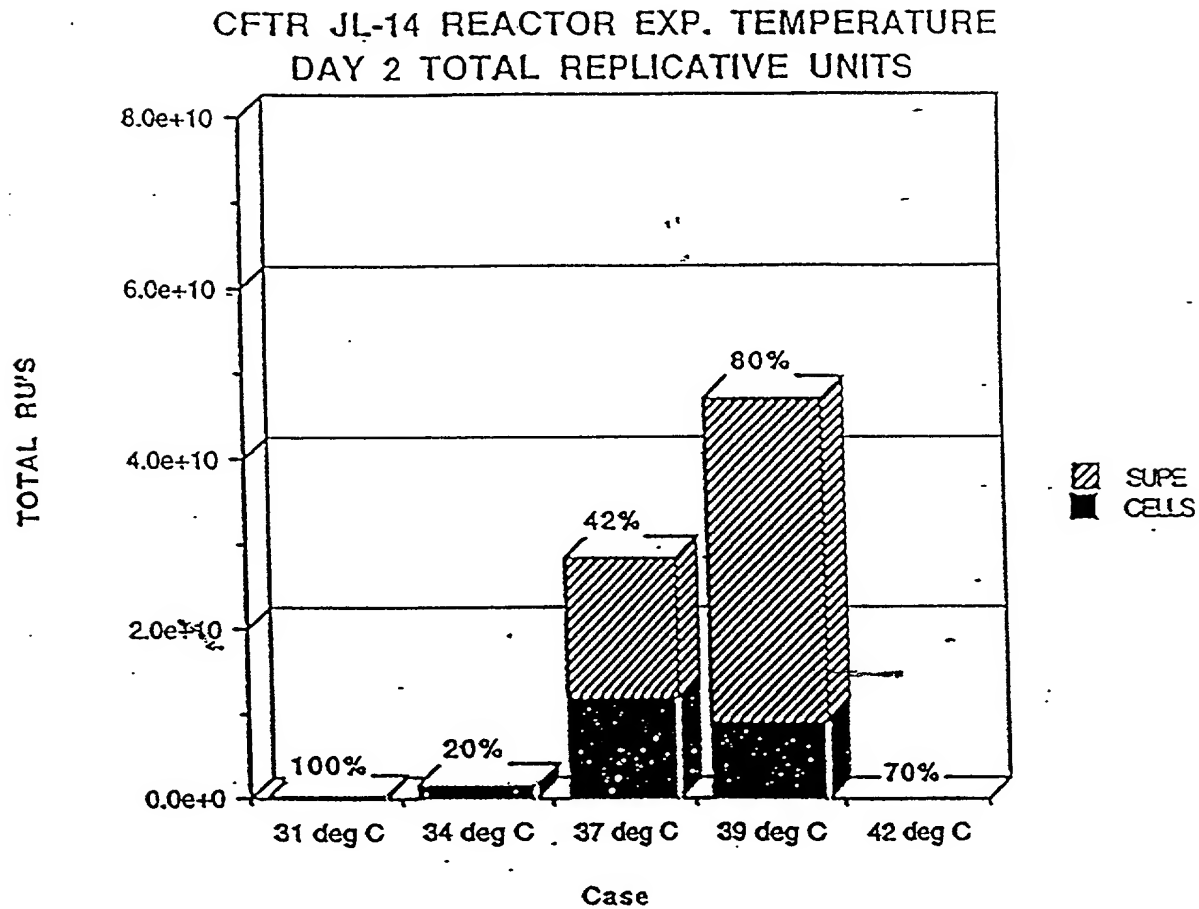
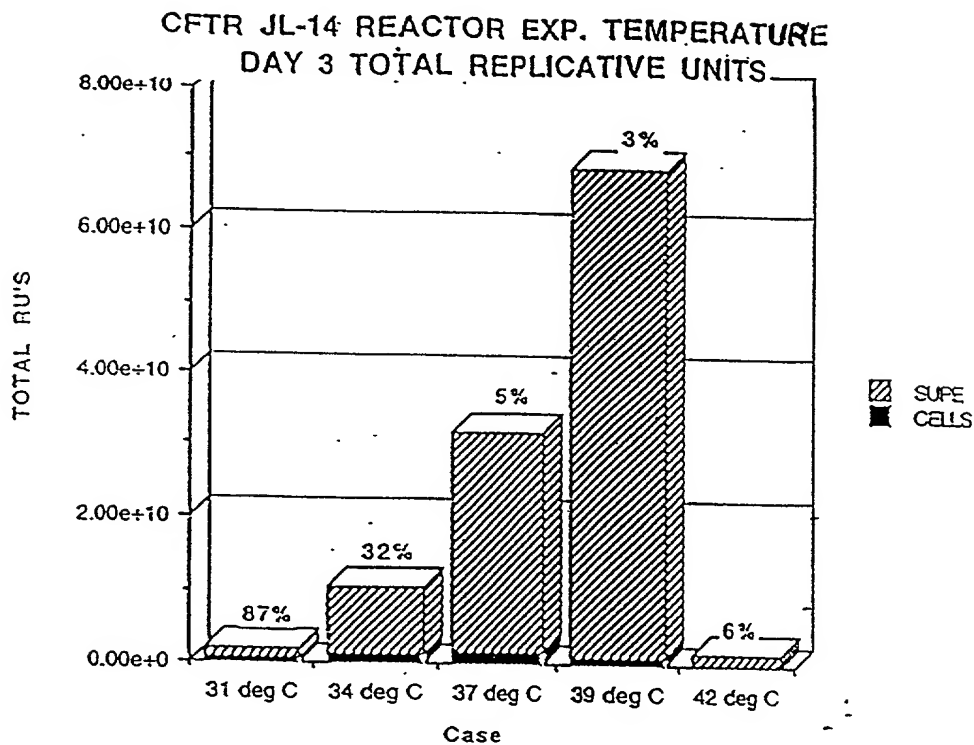
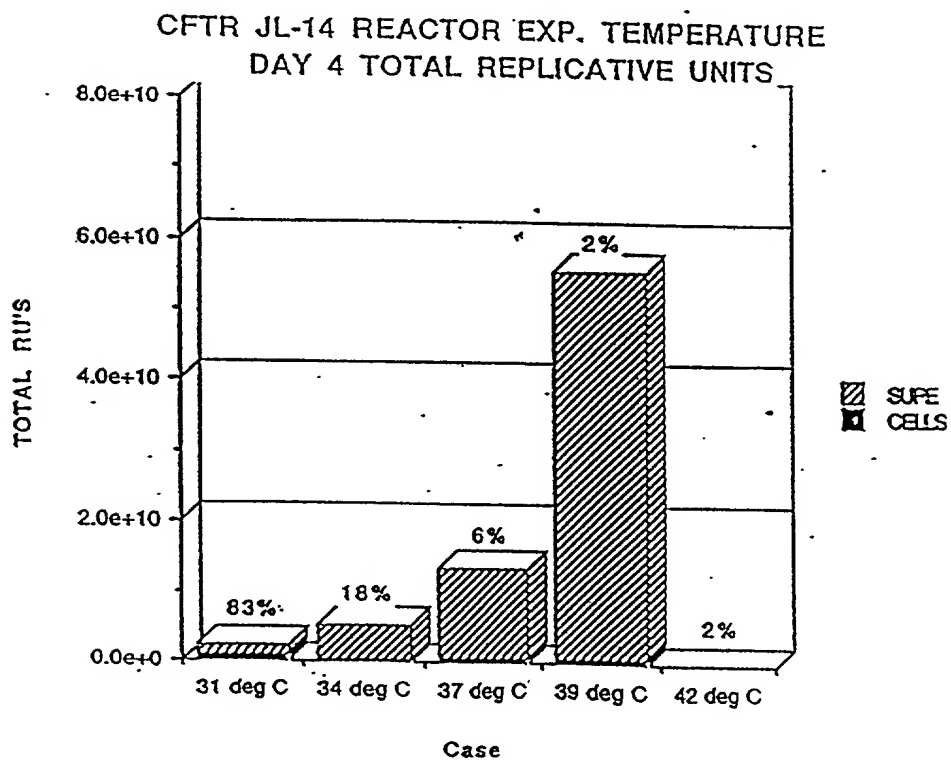


Figure 22A

B



C



Figures 22B and 22C

CFTR JL-14 Feed Experiment II Total DRP's : Day 3 Supe

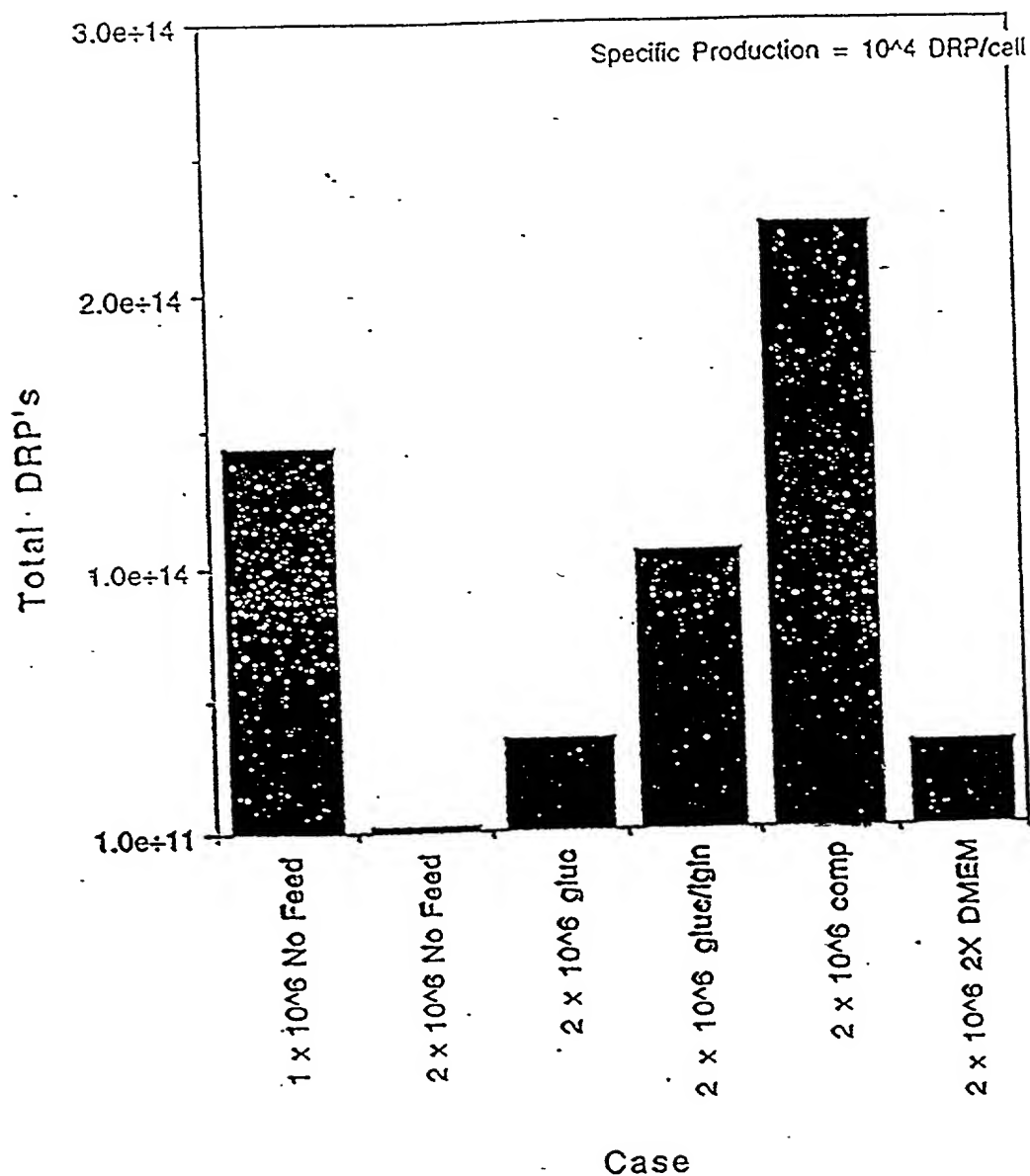


Figure 23

CFTR JL-14 Feed Experiment II Total RU's - Day 3 Supe

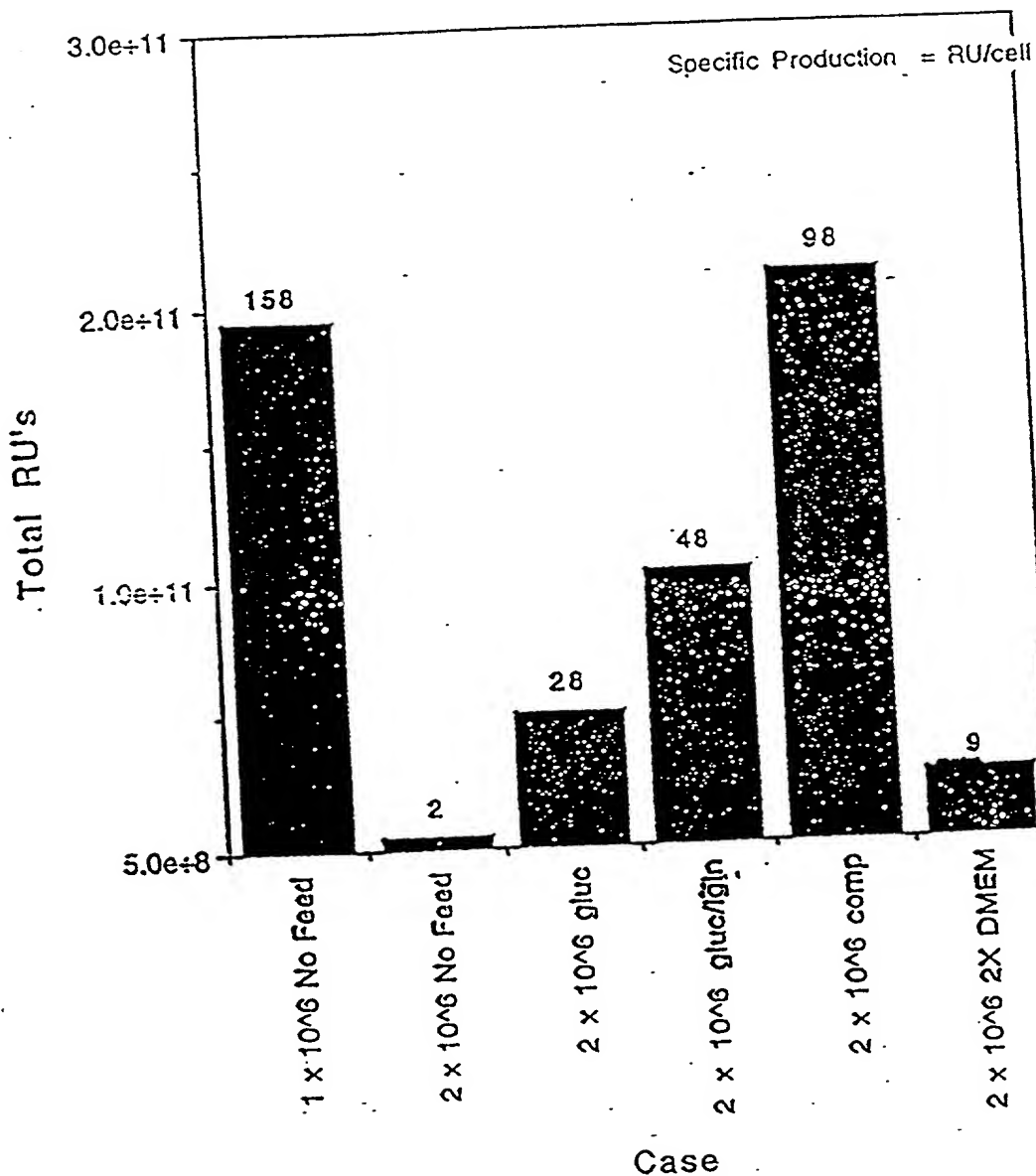


Figure 24

CFTR JL-14 Feed Experiment II.
P/I ratio - Day 3 Supe

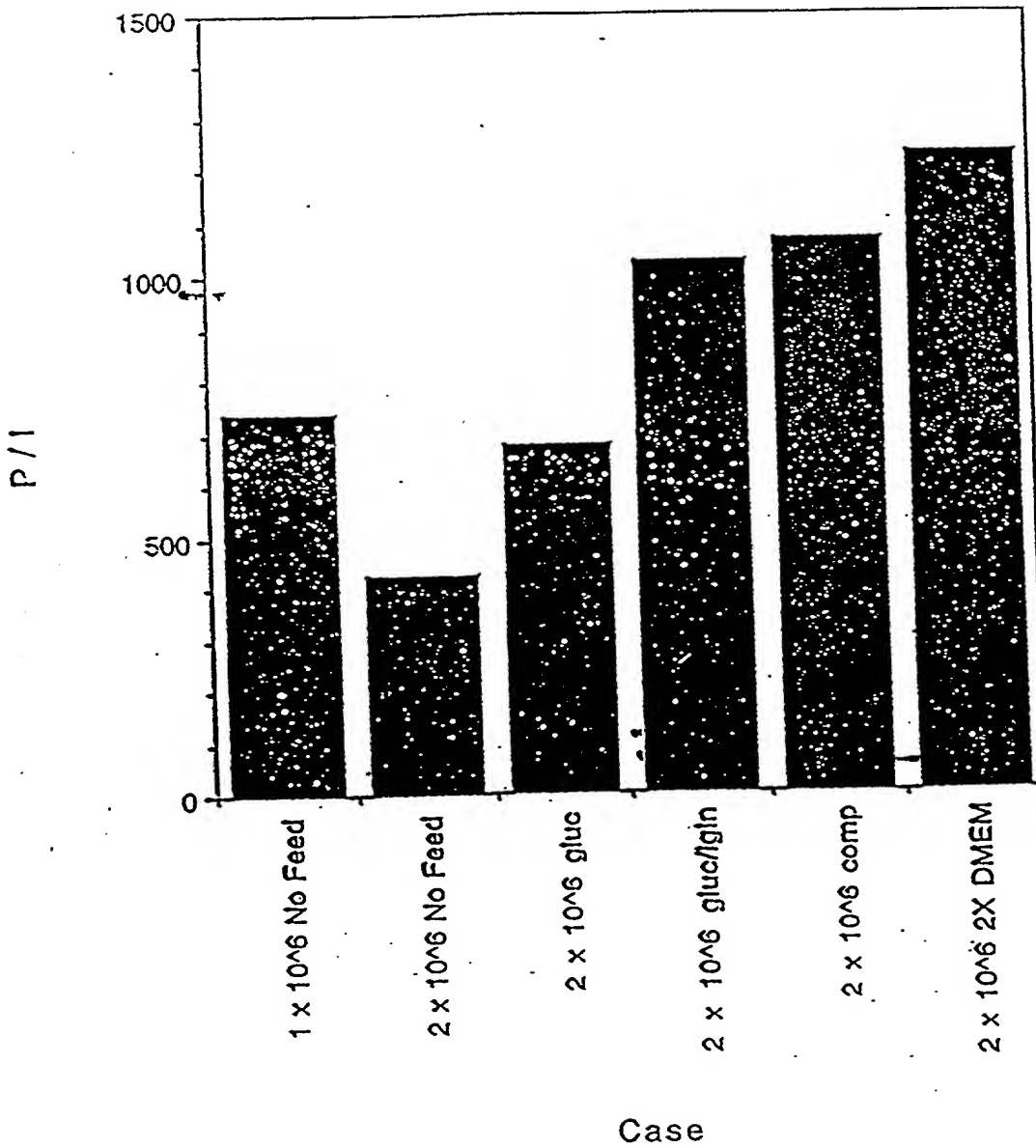


Figure 25

| Lactalbumin Hydrolysate w/Earle's Salts (ELH) | | |
|---|-----------|---------|
| Base Cat No. | 11250 | 11800 |
| | 1X Liquid | Powder |
| Component | mg/L | mg/L |
| INORGANIC SALTS: | | |
| CaCl ₂ (anhyd.) | 200.00 | 200.00 |
| KCl | 400.00 | 400.00 |
| MgSO ₄ (anhyd.) | 97.67 | 97.70 |
| NaCl | 6800.00 | 6800.00 |
| NaHCO ₃ | 2200.00 | - |
| NaH ₂ PO ₄ · H ₂ O | 140.00 | 140.00 |
| OTHER COMPONENTS: | | |
| D-Glucose | 1000.00 | 1000.00 |
| Lactalbumin Hydrolysate | 6500.00 | 5000.00 |
| Phenol Red | 10.00 | 10.00 |

| MEM Amino Acids Solutions ² | | |
|--|------------|------------|
| Base Cat No. | 11136 | 21135 |
| Component | 50X Liquid | 50X Liquid |
| AMINO ACIDS: | | |
| | mg/L | mg/L |
| L-Arginine | 6320.00 | 6320.00 |
| L-Cystine | 1200.00 | 1200.00 |
| L-Glutamine | - | 14600.00 |
| L-Histidine-HCl-H ₂ O | 2100.00 | 2100.00 |
| L-Isoleucine | 2625.00 | 2625.00 |
| L-Lucine | 2620.00 | 2620.00 |
| L-Lysins HCl | 3625.00 | 3625.00 |
| L-Methionine | 755.00 | 755.00 |
| L-Phenylalanine | 1650.00 | 1650.00 |
| L-Threonine | 2380.00 | 2380.00 |
| L-Tryptophan | 510.00 | 510.00 |
| L-Tyrosine | 1800.00 | 1800.00 |
| L-Valine | 2340.00 | 2340.00 |

References:

1. Eagle, H. (1955) Proc. Soc. Exp. Biol. Med. 89, 362.
2. Eagle, H. (1959) Science 130, 432

| MEM Non-Essential Amino Acids Solution ² | |
|--|---------|
| Base Cat No. | 11140 |
| | 100X |
| | Liquid |
| Component | mg/L |
| AMINO ACIDS: | |
| L-Alanine | 890.00 |
| L-Asparagine | 1500.00 |
| L-Aspartic | 1330.00 |
| L-Glutamine | 1470.00 |
| Glycine | 750.00 |
| L-Proline | 1150.00 |
| L-Serine | 1050.00 |

| MEM Vitamin Solutions ² | |
|------------------------------------|------------|
| Base Cat No. | 11120 |
| | 50X Liquid |
| Component | mg/L |
| NaCl | 8500.00 |
| D-Ca Pantothenate | 100.00 |
| Choline Chloride | 100.00 |
| Folic Acid | 100.00 |
| I-Inositol | 200.00 |
| Nicotinamide | 100.00 |
| Pyridoxal-HCl | 100.00 |
| Riboflavin | 10.00 |
| Thiamine HCl | 100.00 |

Figure 26

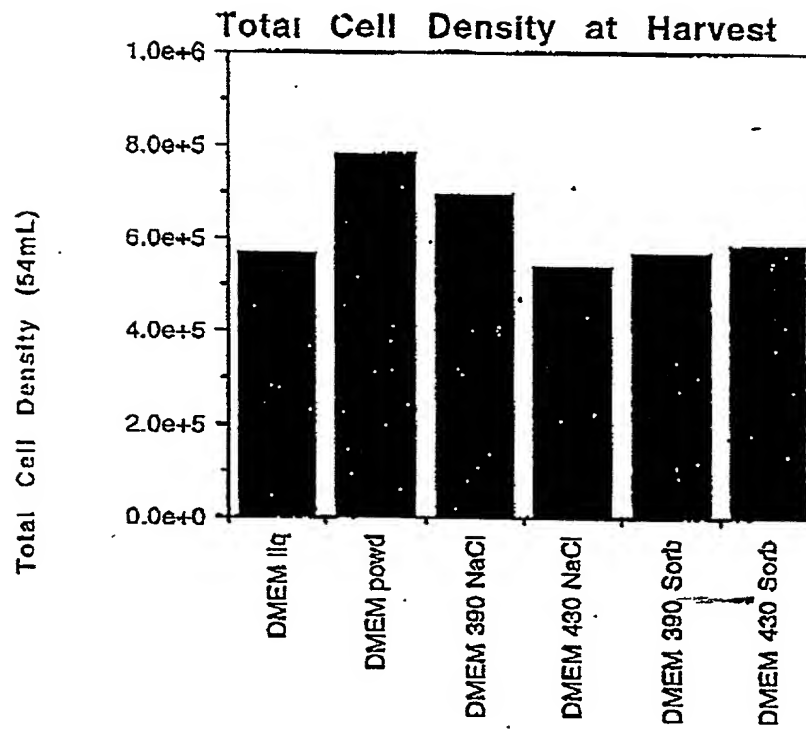


Figure 27

% DRP rAAV Vector Distribution

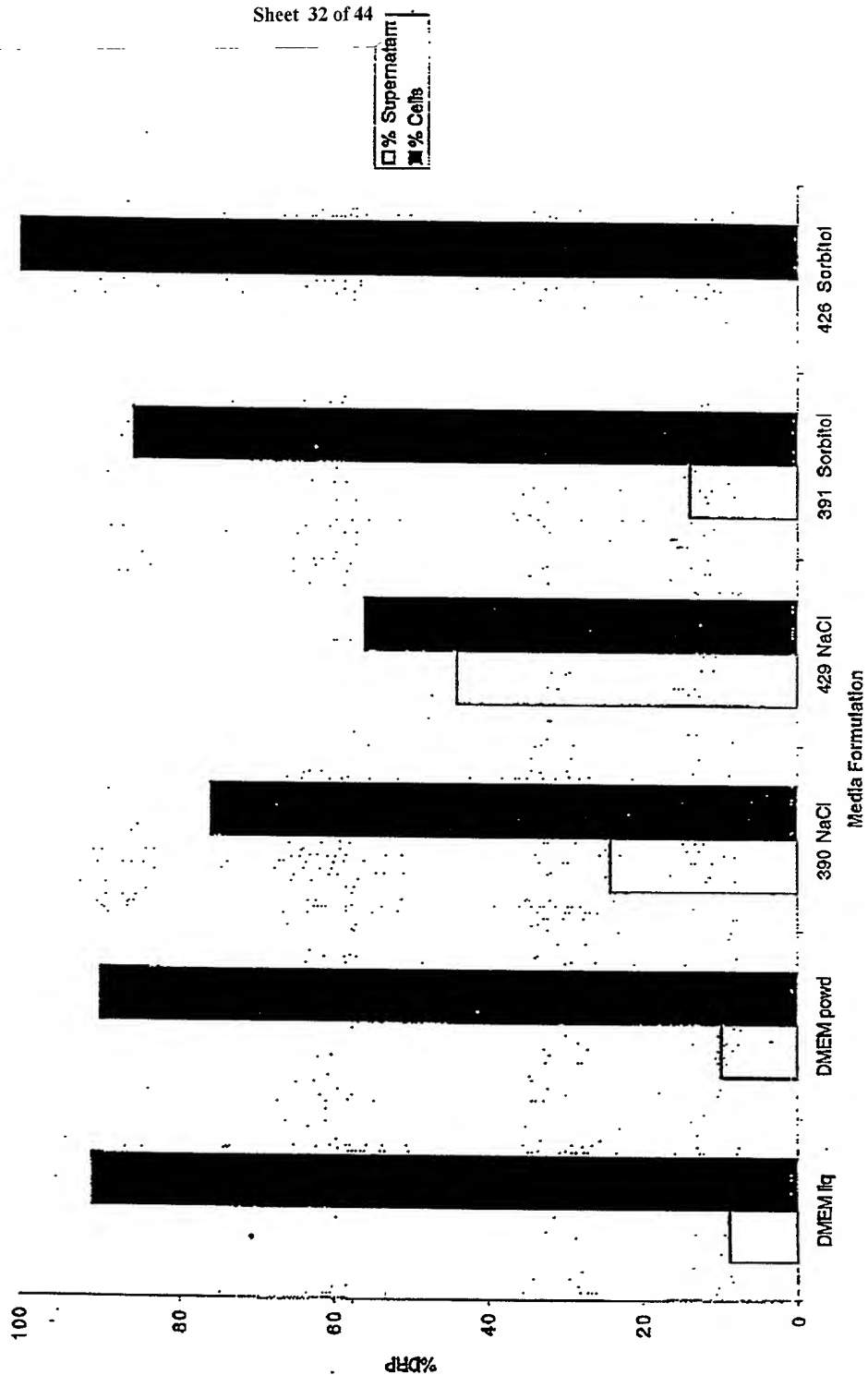


Figure 28

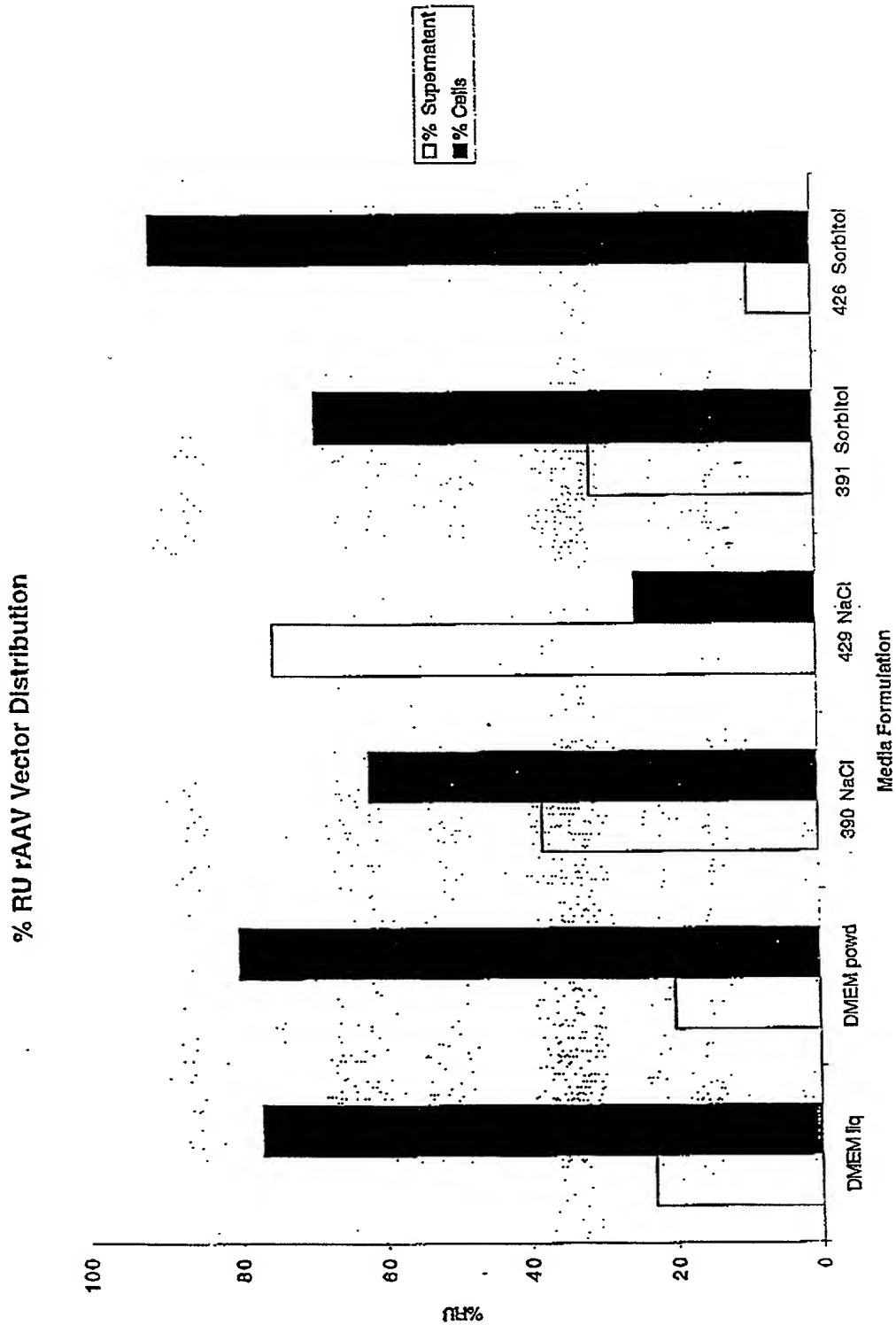


Figure 29

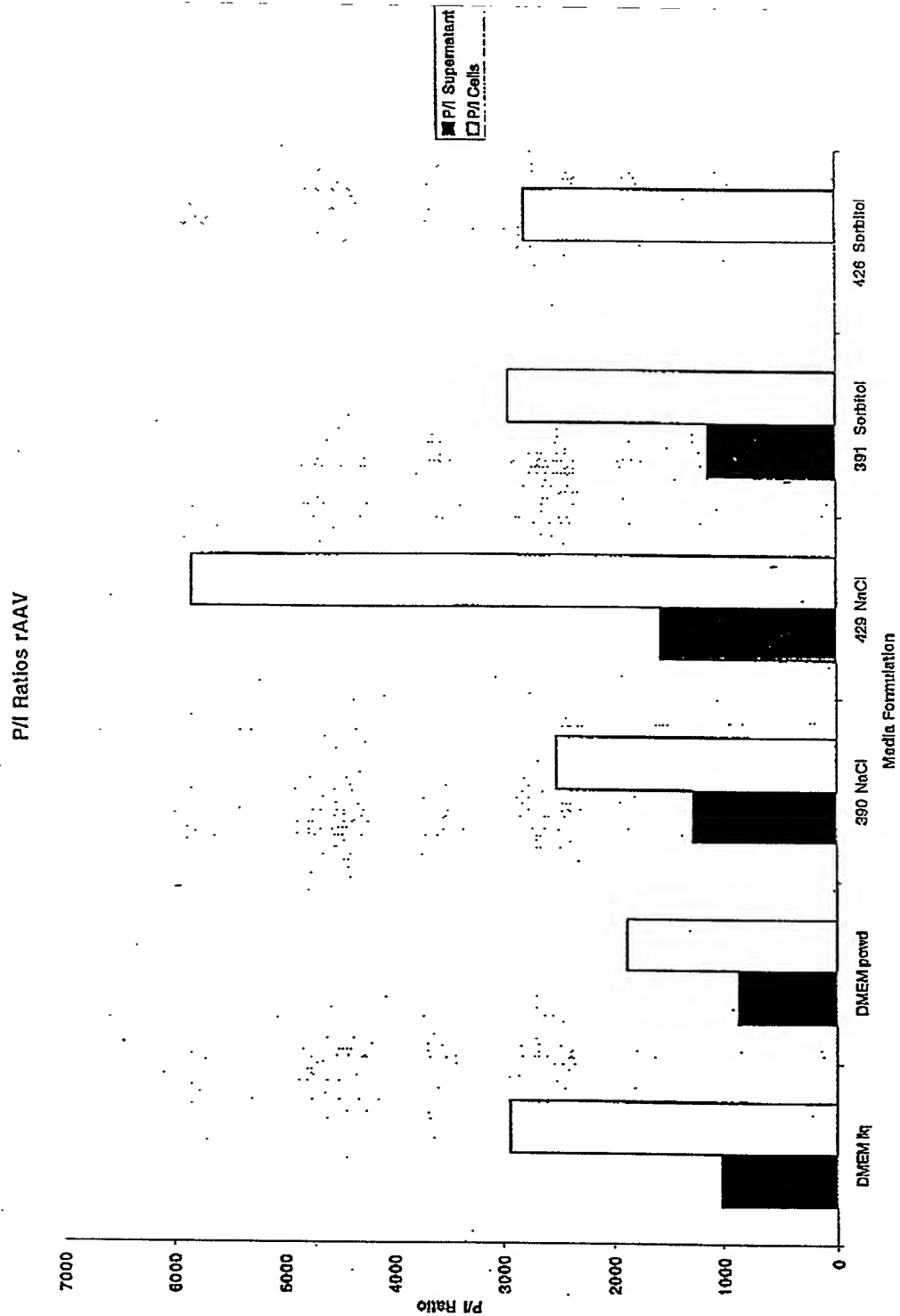


Figure 30

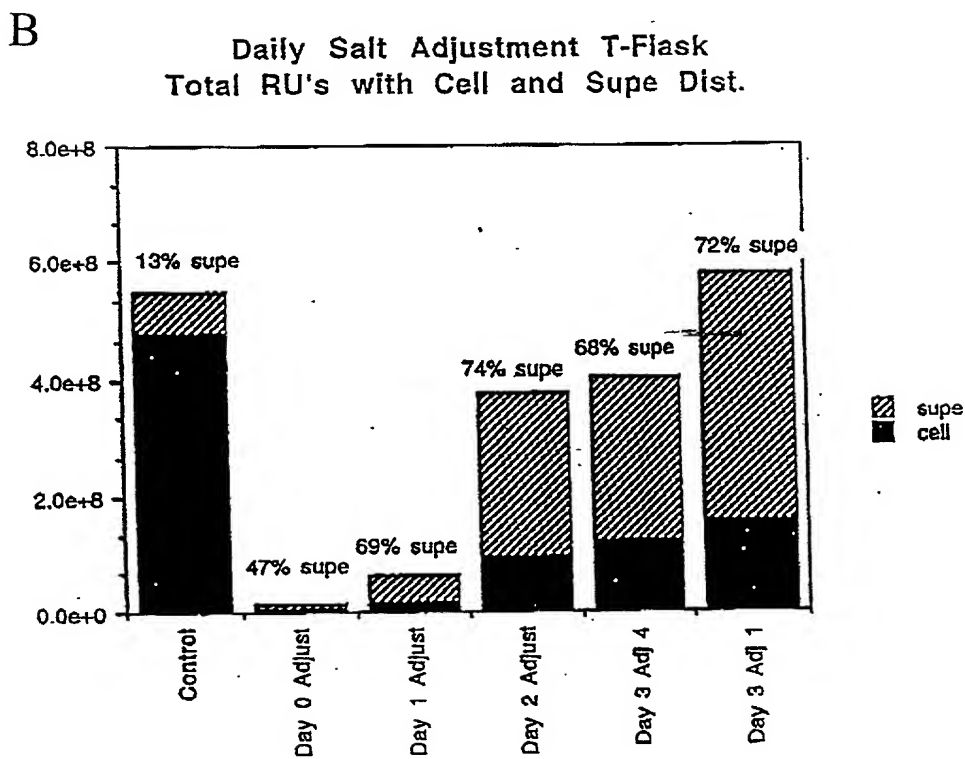
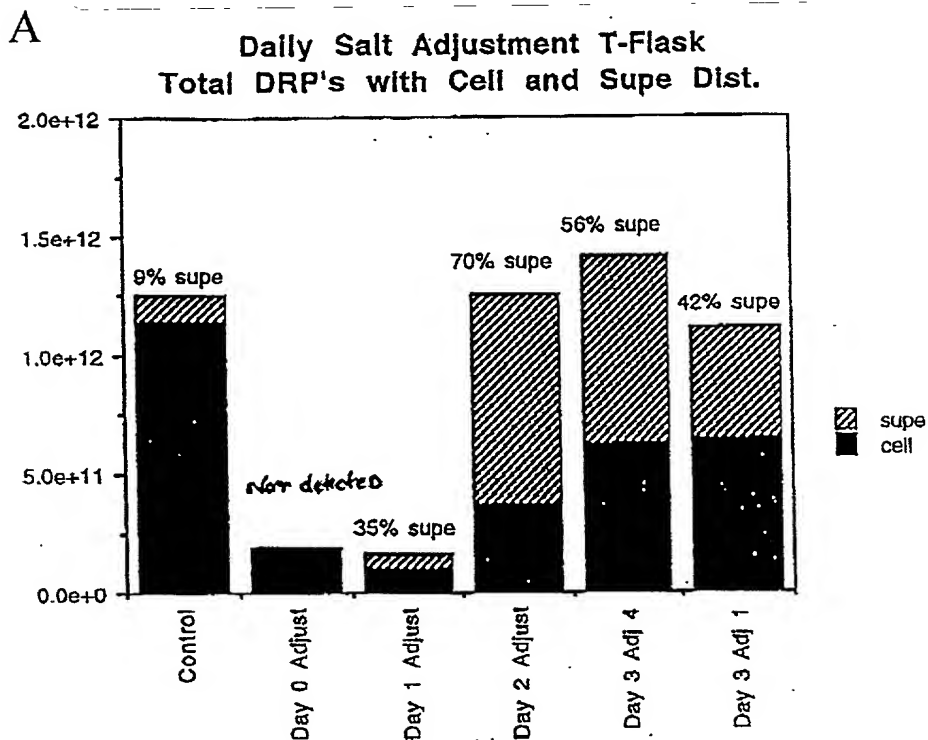


Figure 31

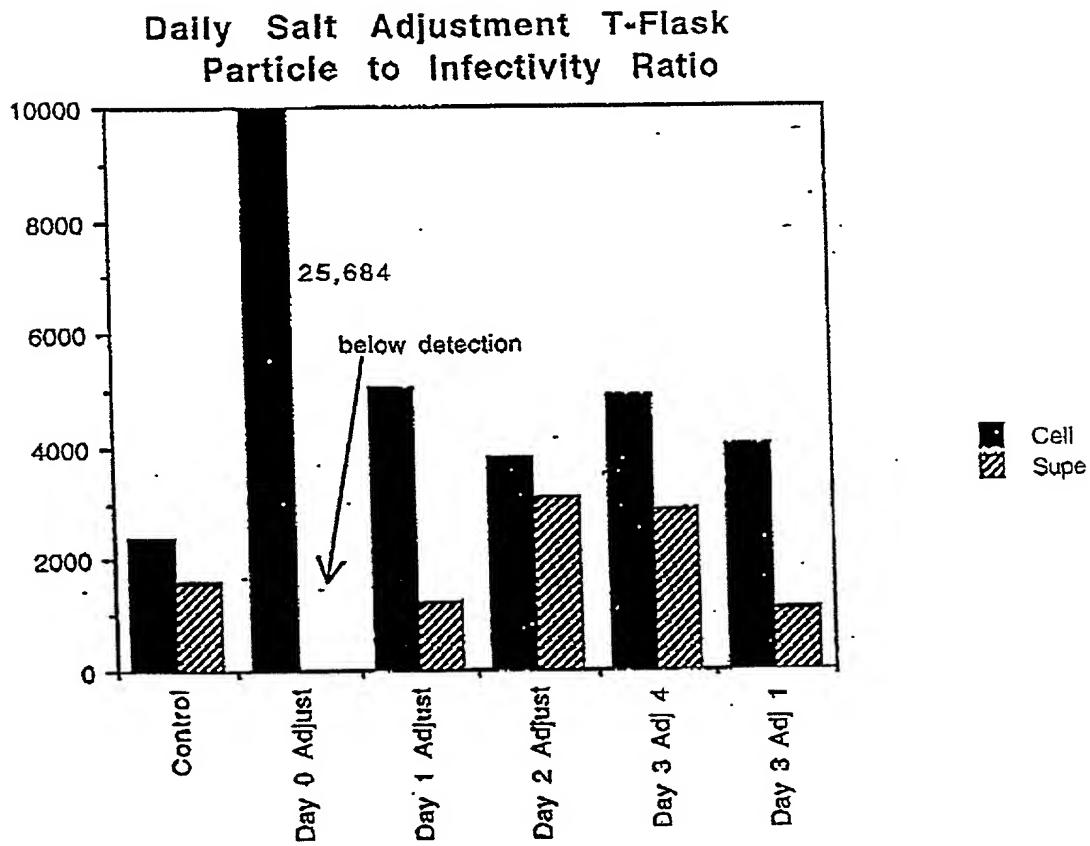


Figure 32

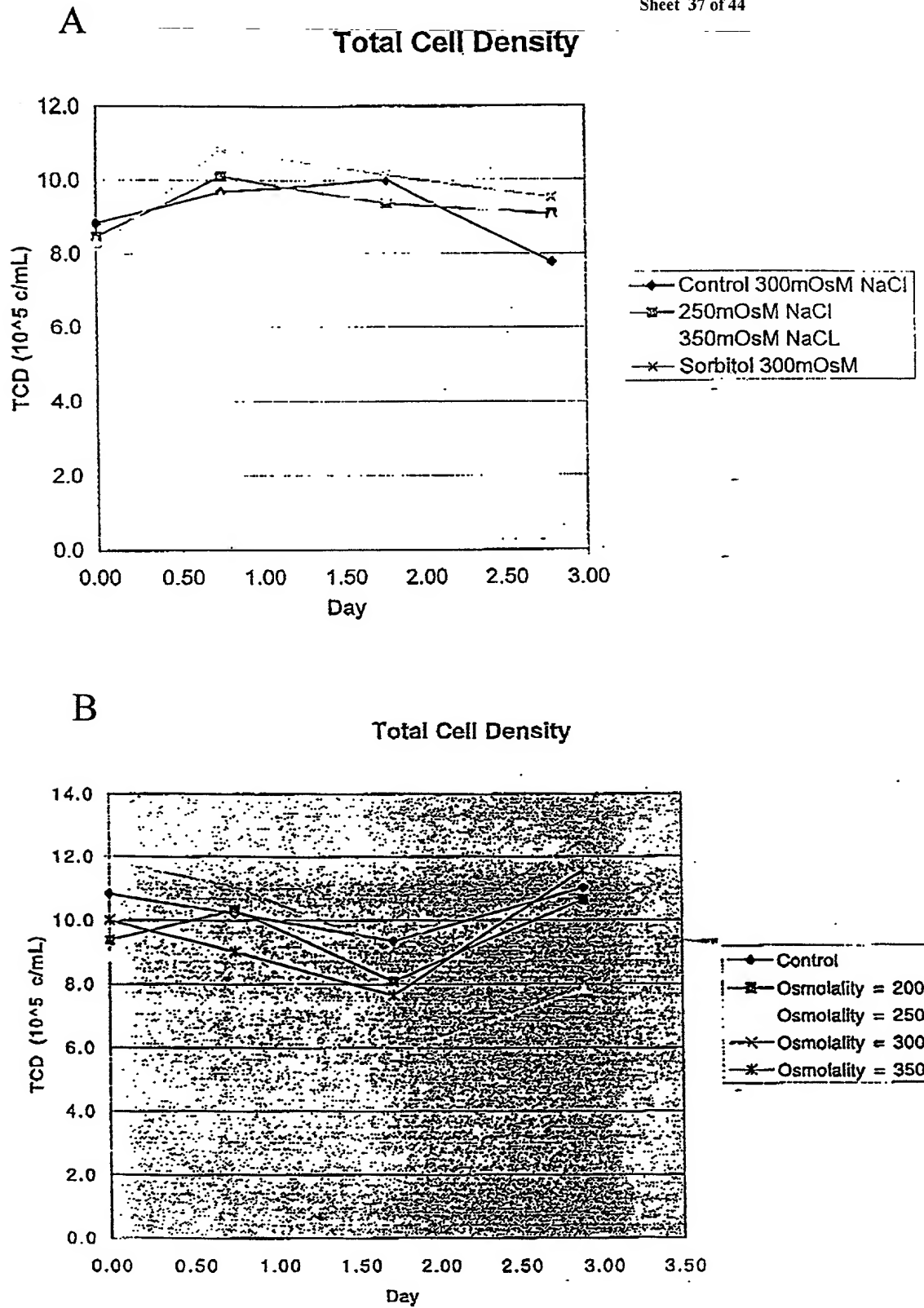
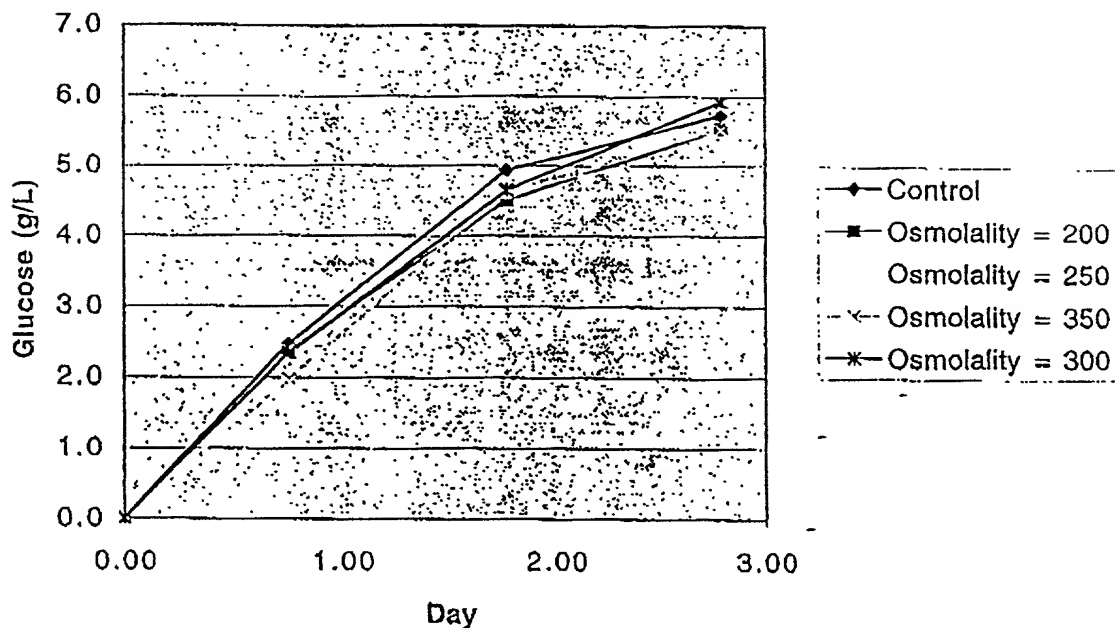


Figure 33

A

Cumulative Glucose Consumed



B

Cumulative Glucose Consumed

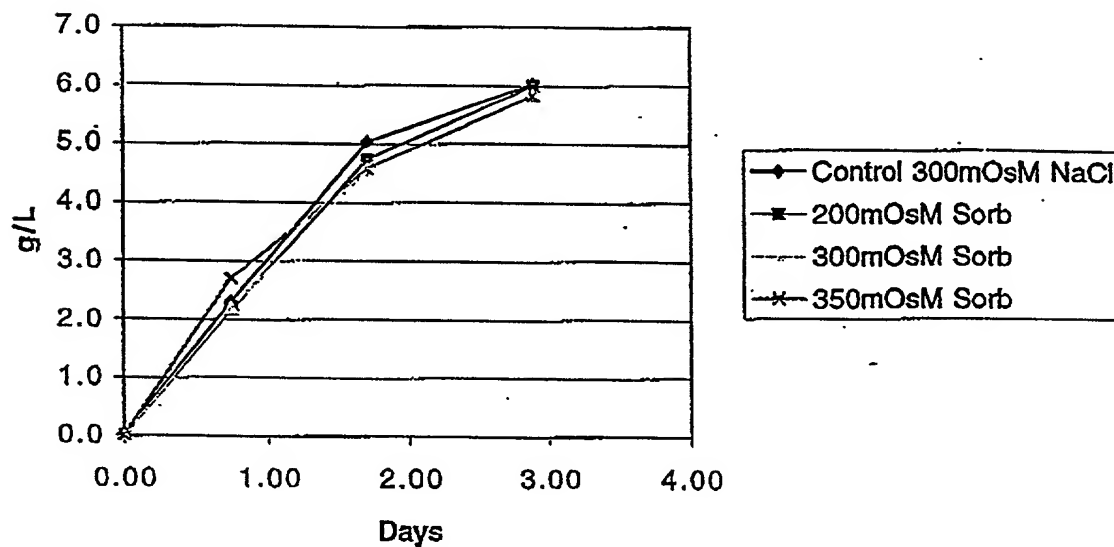
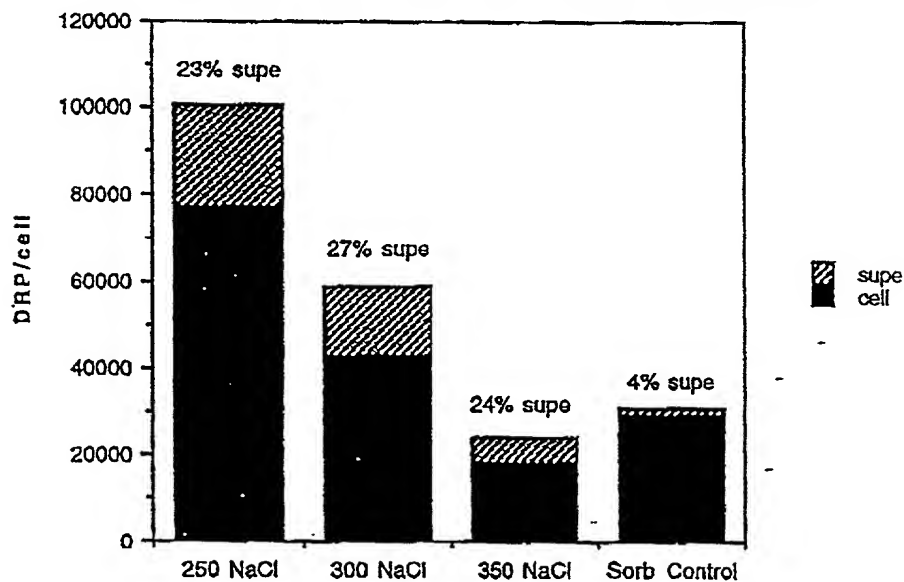


Figure 34

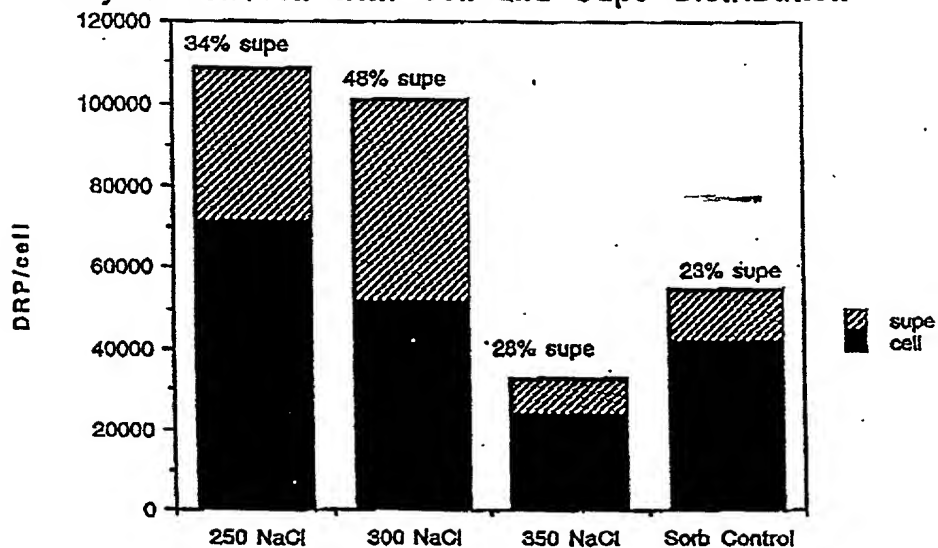
A

Bioreactor Osmolality Experiment (NaCl)
Day 2 DRP/cell with Cell and Supe Distribution



B

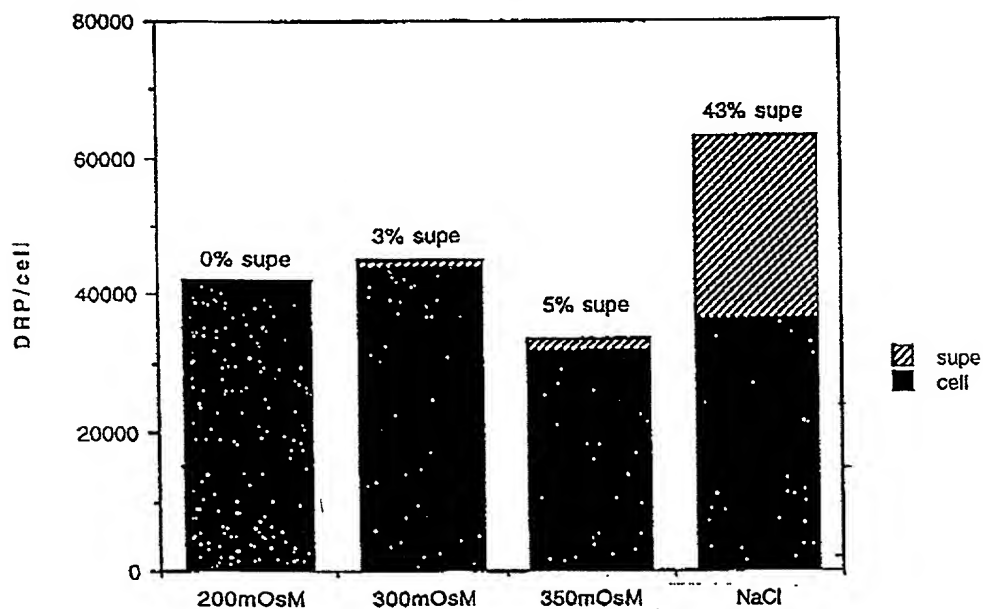
Bioreactor Osmolality Experiment (NaCl)
Day 3 DRP/cell with Cell and Supe Distribution



Figures 35A and 35B

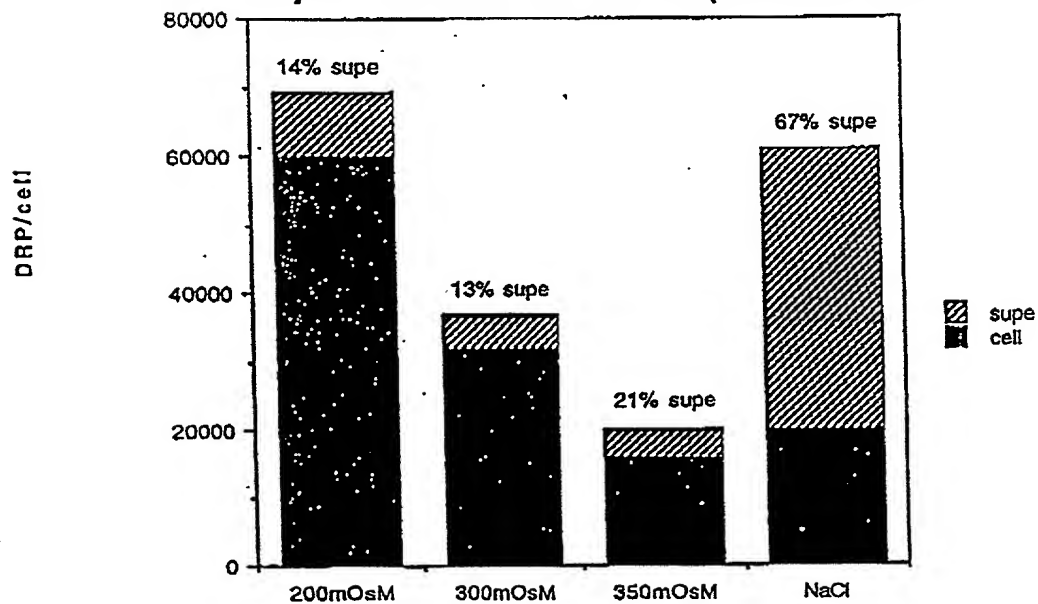
C

Bioreactor Osmolality Exp. (Sorbitol)
Day 2 DRP/cell Cell and Supe Distribution



D

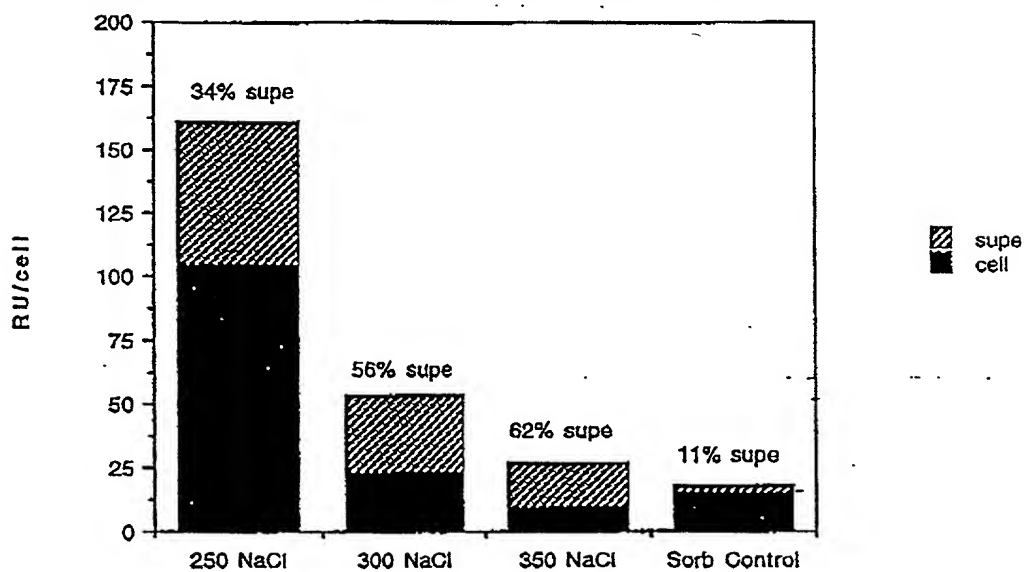
Bioreactor Osmolality Exp. (Sorbitol)
Day 3 DRP/cell Cell and Supe Distribution



Figures 35C and 35D

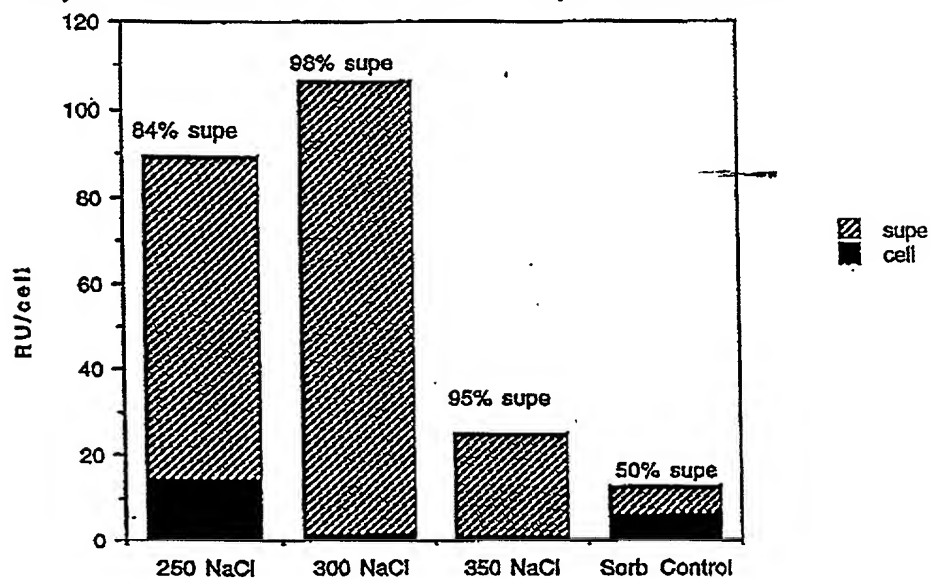
A

Bioreactor Osmolality Experiment (NaCl)
Day 2 RU/cell with Cell and Supe Distribution



B

Bioreactor Osmolality Experiment (NaCl)
Day 3 RU/cell with Cell and Supe Distribution

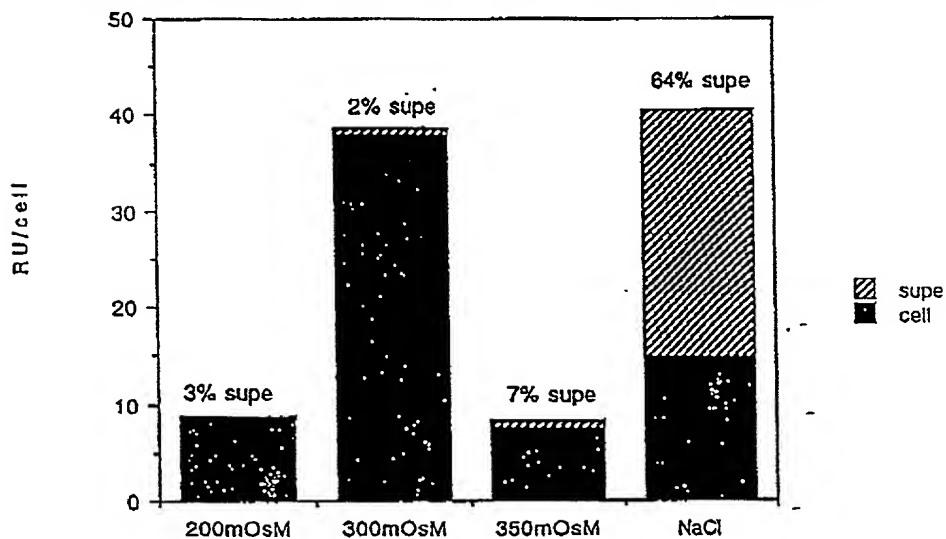


Figures 36A and 36B

1002042-100001
 200601-23402001

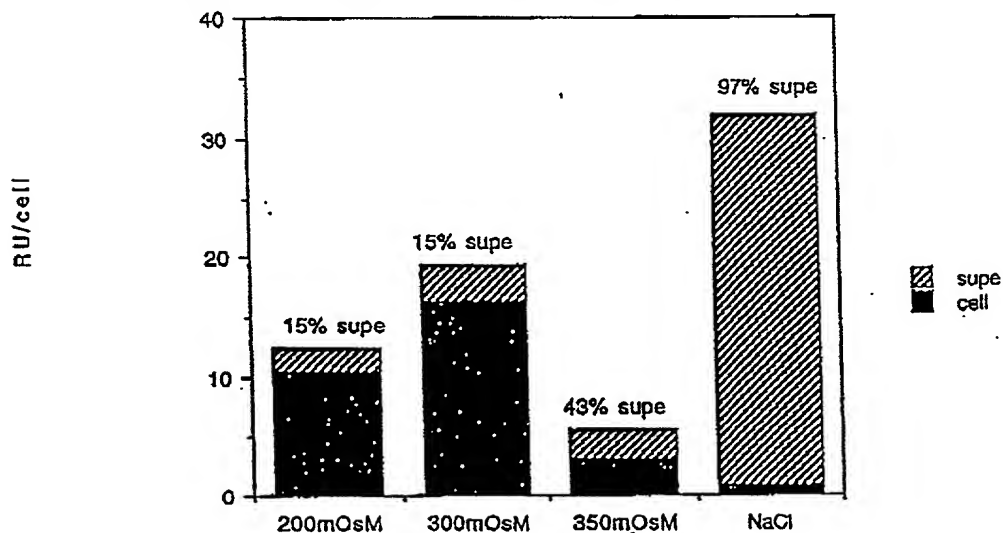
C

Bioreactor Osmolality Exp. (Sorbitol)
 Day 2 RU/cell with Cell and Supe Distribution



D

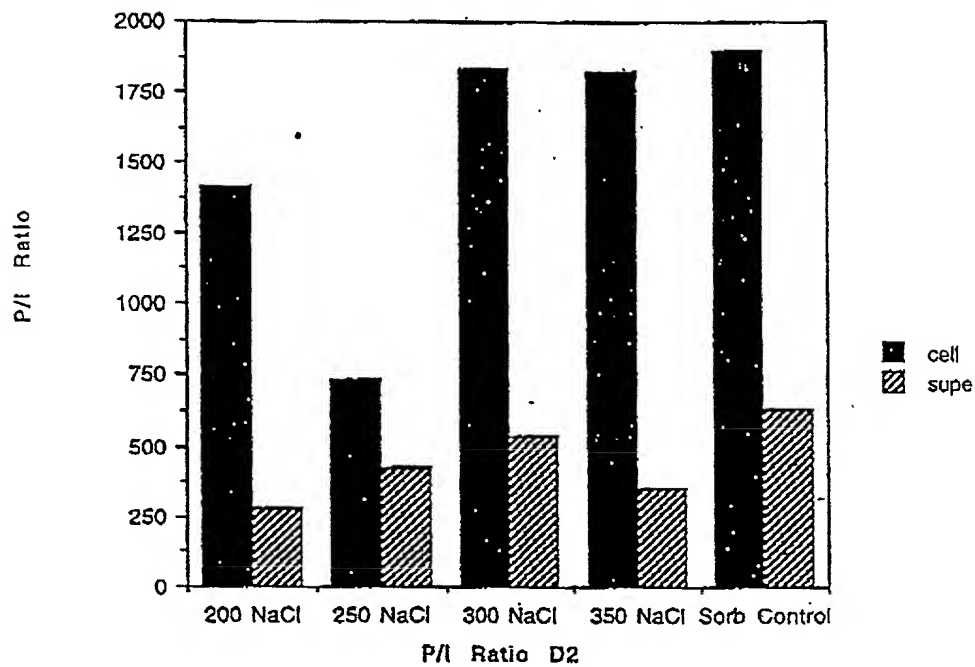
Bioreactor Osmolality Exp (Sorbitol)
 Day 3 RU/cell with Cell and Supe Distribution



Figures 36C and 36D

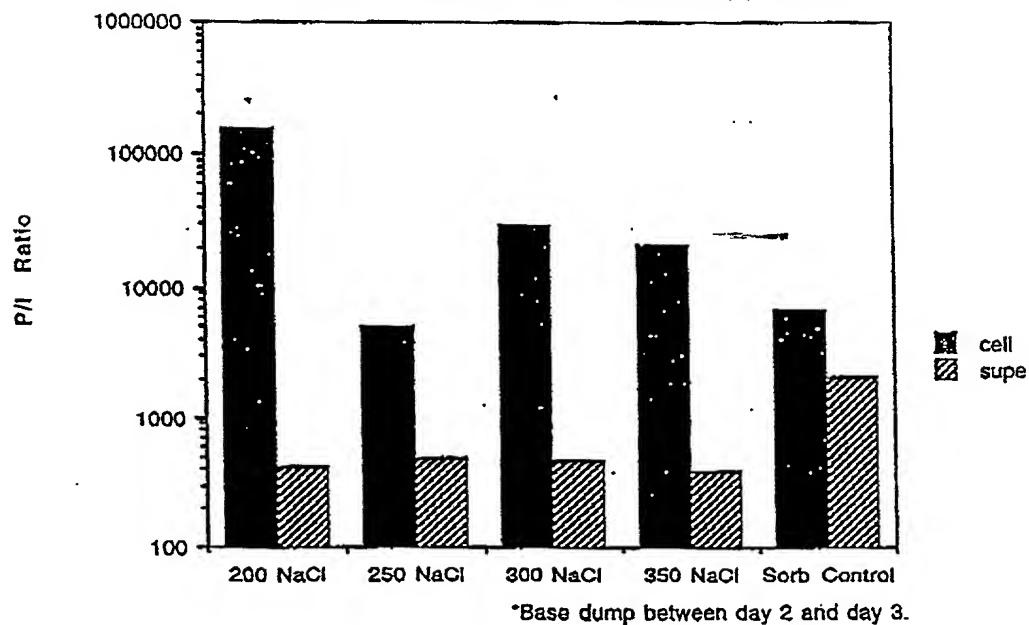
A

Bioreactor Osmolality Experiment (NaCl)
Day 2 Particle to Infectivity Ratio



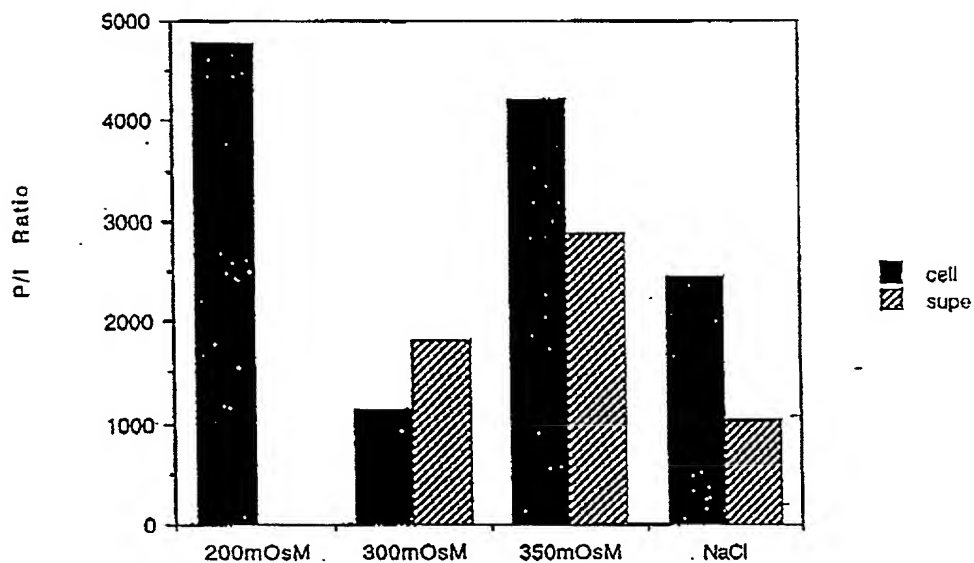
B

Bioreactor Osmolality Experiment (NaCl)
Day 3 Particle to Infectivity Ratios

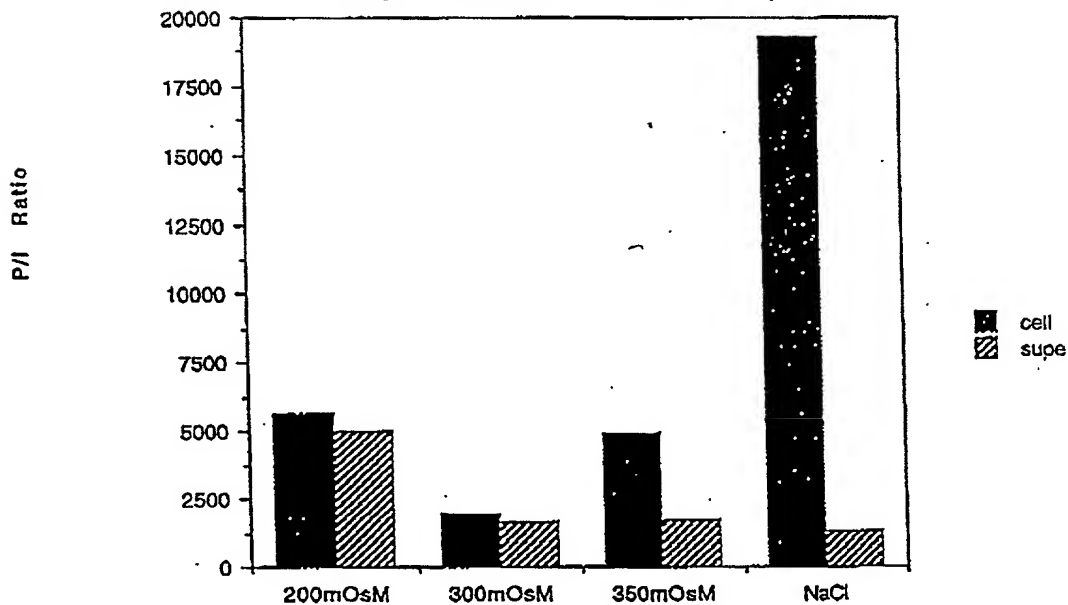


Figures 37A and 37B

C
 Bioreactor Osmolality Exp. (Sorbitol)
 Day 2 Particle to Infectivity Ratio



D
 Bioreactor Osmolality Exp. (Sorbitol)
 Day 3 Particle to Infectivity Ratio



Figures 37C and 37D